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INJURY TO THE KIDNEY WITHOUT AN OPEN WOUND*

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Two patients suffering from traumatic rupture of the kidney were admitted to the hospital on the same day, January 7, 1926. Although external violence produced the rupture in each instance, the associated problems differed widely.

The first case presented a picture of an abdominal emergency from concealed hemorrhage. The patient was a man of 47 years who had fallen from a scaffold to the ground, a distance of about thirty feet. He was in a state of third degree shock. The abdominal muscles were rigid, and tenderness in the right loin was acute. No mass could be outlined on account of muscular inelasticity. A catheter was passed and a large quantity of bloody urine obtained. Hasty preparations were made for blood transfusion but the patient died before this procedure could be undertaken, about one hour after admission and four hours after the accident occurred.

The second case was that of a girl of 14 years who had stepped into space at the top of a rather steep and winding stairway. Landing at the bottom she struck violently upon her right loin. An effort was made to rise but she collapsed in the attempt, at the same time complaining of a very distressing pain in the right loin. When seen an hour later, her appearance was marked by pallor, sweating, and a rapid small pulse indicating second degree shock. The usual sustaining agencies for the treatment of shock were employed. After the first six hours it was evident that the patient would bridge this critical period safely. Pain over the abdomen was widely distributed, and aggravated by vomiting. The left side was yielding but the whole right side of the abdomen was firm and exquisitely tender. Pressure over the right costo-vertebral angle elicited marked tenderness. Hematuria was observed in the first voided specimen and continued for 48 hours.

For several days the urinary output varied from 28 ounces to 20 ounces and on the seventh day 10 ounces. Evidently a reflex anuria was in process of development. The temperature on the morning following the accident was 101.4 degrees. It pursued an irregularly elevated

course until January 6, when it was 102 in the morning and one-half of one degree higher than the record of the previous afternoon. There was distention of the abdomen and obstipation, but vomiting had not recurred. The mass filling the right iliac fossa could now be clearly defined. It extended nearly to the midline of the abdomen. On January 7 the temperature rose to 103.2 degrees and the pulse was 100. The leukocyte count, which was 19500 on January 2, was 22000 on January 4 and 26000 on January 7.

The time for surgical intervention was no longer debatable. The patient was transferred to the hospital and operated upon January 8. Upon opening the kidney fossa a considerable quantity of turbid, sanguineous fluid of urinous odor was evacuated. The temperature gradually fell to normal and convalescence was well established in a few days. The urinary sinus closed permanently at the end of three weeks. The functional capacity of this right kidney has not been investigated since the patient left the hospital.

You may ask why this patient was not operated upon sooner. My answer is because no one of us in conference, and we held many, knew that the exudate, though large, would not subside spontaneously. When operation was decided upon there was no dissent. Surgeons of experience in this field have reported cases in many ways parallel to this, which subsided without intervention. Later, and more at length, we shall discuss this phase of the treatment of rupture of the kidney. For the present, it is pertinent to observe that injuries to the kidney from external violence are not common because of its situation and the shock absorbing function of the perirenal fat.

Kuster in 30,000 cases of injury and disease at the Clinics of Basel and Berlin could tabulate only 10 cases. Another surgeon, Israel, notwithstanding a large experience records only one operative case. In 1896 Kuster collected records of 306 cases, 241 of which were free from other complications. He says that injuries of the right kidney are more frequent than those of the left. They are not wholly absent from the first ten years of life, but are most frequent

*Read at the annual meeting in Boston October 1, 1926.

in the second and third decades. After that they are again more rare. This relative frequency corresponds, of course, to the frequency with which persons of different ages are exposed to injury. No less than 94% of the recorded cases occurred in males, and only 6% in females. This difference, though less marked in childhood, is even then a striking one, since of the 41 patients under fifteen years who suffered from an injury of the kidney, 80% were boys. It seems hardly possible that this condition can be due wholly to a difference in occupation and to the greater wildness and recklessness characteristics of boys and men. (Kuster believes that the structure of the female body, with its broader iliac crest and thicker layer of fat, affords the kidney greater protection, and that the female dress is often such as still further to protect the kidney from serious injury).

The kidney may sustain injury by a variety of causes. It is often difficult to determine exactly how the injury is produced. If a blow is received in the lumbar region, or if the body is crushed between moving objects or run over, the mechanism of the injury is clear enough. But there are other cases in which the kidney is injured by force applied to the body at a distance from the kidney. Schede and other writers have reported cases in which the kidney was seriously injured by severe muscular exertion due to lifting heavy weights, jumping or performing gymnastic exercises.

Rayer and Tuffier explain the injury to the kidney following blows upon some other portion of the body as due to the jarring thereby caused. Le Dentu ascribes it to contrecoup similar in nature to the injury which the brain suffers from a blow on the opposite side of the skull. It is fully as probable that the more remote injury occasionally produces a sudden change of posture, a muscular contraction so spasmodic that the kidney in its hydraulic state yields to mechanical laws. Naturally any sort of bodily injury which throws the kidney violently against the transverse processes of the vertebrae can injure the organ.

Kuster has drawn attention to hydraulic pressure as a cause of renal injury. He arrived at this conclusion as a result of the following experiment: "If a kidney, recently removed from an animal, is thrown with force upon the floor, its parenchyma will show the effect of the violence. It is superficially bruised and contains many tears." He also demonstrated that if the veins of the kidney are first ligated and the artery is distended and ligated, and the pelvis is distended, and the ureter ligated, the result of throwing the kidney violently against the floor is quite different. Instead of the slight circular tear there will be found a deep tear, and a deep bruise instead of a superficial one, and other deep tears extending into the renal pelvis.

It has been shown also that the lower ribs of the left side can be pressed against the kidney

by a moderate amount of force, and if the vessels and ureter are distended and then ligated, a blow with a wooden mallet will easily suffice to produce a rupture which may extend to the anterior as well as to its posterior surface.

The most natural explanation of these facts is that the force which was applied at the side of the body presses the movable ribs against the distended kidney and thus causes the latter to rupture. If the blow is received from in front, the injury is probably due to very energetic contraction of the diaphragm and other muscles.

Character of Injury—Schede divides the injuries which the kidney may receive into five classes:

1. The fatty capsule and the fibrous capsule may be injured without damage being done to the parenchyma. The result is usually an effusion of blood between the kidney and the fatty capsule, or infiltration of the fatty capsule with blood. The later result is a connective-tissue induration, or the change of a large blood-clot into a cyst.

2. The parenchyma may suffer a contusion associated with hemorrhage into the tissue, even though no rupture of its substance is visible. At other times there will be a slight transverse, radiating, or star shaped tear which does not puncture the renal pelvis. Such an injury does not produce severe symptoms and is usually seen only at autopsy after death has been caused by some other and more serious injury.

3. The tear, or tears, in the kidney may penetrate the renal pelvis. They may be traced transversely or obliquely, or they may radiate from a certain point. Such a fissure may separate the organ transversely into two portions, or, in very rare instances, it may split it longitudinally. The hemorrhage is then much more serious. It may infiltrate the surrounding tissues and extend into the fatty capsule, into the retroperitoneal tissue, along the large intestine, into the mesentery and the small intestine, along the spermatic cord to the inguinal ring, into the scrotum or the labiae, into the pelvis, or into the abdominal wall.

4. The kidney may be crushed to bits. Under such circumstances large sections of the kidney may be wholly separated from their blood-supply. If such a patient does not die from primary or secondary hemorrhage, he will succumb to the gangrene which must necessarily follow.

5. There may be perirenal injury, such as rupture of the renal vessels or of the ureter, or of the whole hilus. The results of such an injury are naturally severe. There may be quick death from hemorrhage, or necrosis of the whole kidney or a considerable portion of it, or from extensive infiltration of urine with gangrene or general sepsis.

Often the patient suffers from injury of other organs, such as fracture of the ribs, rupture of

the peritoneum, injuries of the intestine, or liver, or spleen, etc.

On account of the absence of a well developed fatty layer outside the peritoneum in children laceration of the peritoneum is more common. It occurred in 12% of Watson's cases.

Symptoms—The symptoms of rupture of the kidney are often masked by a state of shock. In both cases reported above, shock was immediate and severe. It is difficult to say whether this shock is due to hemorrhage or to the injury of the kidney or whether it is due to the injuries of other tissues which invariably accompany it. This question is the more pertinent since there are instances in which a patient whose kidney has been severely wounded has walked for a considerable distance, or continued to work until gradually increasing anaemia, due to internal hemorrhage, has made this impossible. It seems likely that the rapidity of the hemorrhage is the important factor in accounting for shock.

The pain may be extreme, or it may be slight, or, being slight at first, it may gradually increase. This increasing pain is apparently due to the gradually increasing tension in the kidney fossa as the result of continuing hemorrhage or urinary obstruction. It may be due to the passage of blood-clots through the ureter. If the pain originates in the ureter, it will be referred not only to the lumbar region, but also to the groin and serotum. Such reference of pain to a distant part may also be due to extrageneration of blood along the course of the sensory nerves, such as the ilioinguinal or genitocrural.

There may or may not exist such external signs of injury as cutaneous abrasions, ecchymoses, and local swellings. Such injuries of the skin are often of help in determining the character of the blow and its probable effects. A slowly developing, more or less circumscribed tumor in the lumbar region is significant of a collection of blood or urine in the renal pelvis or within the fatty capsule.

One of the most important symptoms of renal injury is the appearance of blood in the urine. It is often absent both in the slight injuries in which the tear in the kidney reaches its pelvis and in severe injuries in which the ureter is severed. But in the large majority of severe injuries of the kidney hematuria is present. Watson reported hematuria as occurring in 80% of his cases. The character of the hemorrhage is variable. If the blood is small in amount and has time to coagulate in the pelvis of the kidney or ureter before it passes into the bladder, some hours may elapse after the injury before the blood appears in the urine, and the quantity may even then be very small.

If the hemorrhage is larger in amount, the blood flows quickly through the ureter and mixes with the urine already in the bladder and excites a desire to urinate, with the result that the patient passes urine which appears to be pure

blood. Painful micturition occurs as well as difficulty in emptying the bladder.

Sometimes the bleeding is so slight that severe symptoms do not arise. There may be so little blood in the urine that it cannot clot, but merely stains the urine red. This symptom may persist for several days or a week or more and the patient remain at his usual occupation. Investigations appear to indicate definitely that hematuria may follow very slight injuries of the kidney, so slight that the change in the appearance of the urine comes in the nature of a surprise.

As the injury of the kidney may consist in a complete division of the organ, or crushing, or tearing away of the whole kidney, the hemorrhage may easily threaten life. The collapse which occurs immediately after a severe injury of a kidney passes gradually away, while a hemorrhage brings about a weakness which increases more or less rapidly and an anaemia which becomes more and more marked. If the blood flows directly into the bladder, the quantity which is evacuated will give some idea of the extent of the hemorrhage. Schede describes a picture in which the ureter is torn or displaced. The hemorrhage then takes place internally, and can only be recognized by the progressing anaemia and the presence of an increasing tumor, which may be soft or hard, sharply limited or diffuse. If the peritoneum is torn and the blood flows directly into the peritoneal cavity, its presence will be manifest by an increased area of dullness in the lower portions. In any of these conditions death from hemorrhage may occur in a short time. Between this extreme and the other of a slight admixture of blood in the urine, which passes off in a day or two, there are all possible degrees. It is by no means uncommon for secondary hemorrhage to follow an injury of the kidney. This is due to the influence of the urine in softening thrombi, aided, perhaps, by suppuration or gangrene. The same author states that such secondary hemorrhage may in a moment so change the whole outlook that an injury from which the patient has apparently almost recovered may speedily become fatal.

If the excretory function of the injured kidney is suspended, the result will be an oliguria whether the opposite kidney is affected by reflex action or not. Even though the opposite kidney proves itself ready to take up the work of the injured one, this can only be done after a certain time has elapsed, and the quantity of urine excreted depends in great measure upon the distention of the renal vessels; and if the blood-pressure is low as the result of severe hemorrhage, it is not to be wondered at that some days are necessary before the healthy kidney can do the work of two. In case 2, the output from the healthy kidney diminished during the first few days until the condition of reflex anuria became imminent.

A third cause of death after injury of the

kidney is the degeneration which follows the escape of urine into the surrounding tissues. The destruction of tissue which follows the escape of urine from the urethra after perineal injuries is well known. It is true that a considerable quantity of unchanged, acid healthy urine can be borne by the tissues without special injury, and it will be reabsorbed from them. But this reabsorption is only possible within certain narrow limits, and any fermentation of the urine at once puts an end to its harmlessness. Extravasated urine affords an excellent field for the growth of bacteria, especially if the hemorrhage makes it necessary to insert a catheter one or many times. Even with the greatest care bacteria may thus be brought into the bladder; and once the bladder is infected, the infection will readily spread to the area of traumatism. Therefore the pathology which follows the trail of extravasated urine in general applies to these cases with the added risk of peritoneal invasion.

If the peritoneum is torn so that there is open communication between the infected traumatic area and the peritoneal cavity, gangrenous peritonitis and death will speedily follow. Even without such complication, gangrene or suppuration of the kidney and its environments may seriously threaten life. The infection may pass down the ureter to the bladder and then extend to the other kidney, and thus produce death. Or, the peritoneal tissue may become infected and the subdiaphragmatic suppuration may extend to the pleura either by continuity or by bursting through the diaphragm. Various after-effects may be felt though the patient recovers: thus suppuration may continue and give rise to a permanent fistula, or the kidney may atrophy, being imbedded in scar-tissue, or a parenchymatous or interstitial nephritis may persist.

Diagnosis—It is not difficult to establish a diagnosis if the kidney is severely injured. Slight injuries may be easily overlooked, but this mistake is unimportant. It is desirable for the sake of prognosis and treatment not simply to recognize a severe renal injury, but to determine the character of such injury, and the presence of complications in other organs, so as to protect the patient against the harm which may come from admixture of blood with the urine, or from interstitial hemorrhage, or from infiltration of urine, or from retention of urine, or from gangrene and suppuration, or from reflex anuria. The surgeon should also endeavor to learn whether the kidney which has been injured was previously healthy, whether one or both kidneys are injured, and whether the uninjured kidney is healthy. In order satisfactorily to answer these questions it is desirable to catheterize both ureters with great caution, to possess exact knowledge in regard to the quantity and quality of the urine from each kidney.

Diagnosis of coexisting injury of the peritoneum may be very difficult. If the force has

been applied from behind the body, the peritoneum is less likely to have been injured. If the pulse and temperature gradually rise and tenderness spreads throughout the abdomen and vomiting persists there is probably peritoneal involvement. Free fluid in the peritoneal cavity makes the diagnosis certain, although in these cases the exact fluid level is very difficult to determine. A Roentgenologic study of the injured kidney with pyelogram should be made as well as a determination of the functional capacity of the well kidney. However in severe cases the exigencies of the situation may preclude the use of the cystoscope.

Prognosis—Statistics collected by Maas and Kuster show a mortality of 47 per cent after injury of the kidney (144 deaths in 306 cases). The mortality is much less if one excludes those cases in which there was a complicating injury of some other organ of severe character, such as injury of the brain or spinal cord, or of the lungs or pleura, or of the peritoneum, or of some abdominal organ, or of the bladder, or of the other kidney, or of a complicated fracture. Of these there were 84 such cases, with a mortality of 92 per cent. Subtracting these, there remain 222 cases of uncomplicated renal injury, with a mortality of 30 per cent. In round numbers therefore, one-half of the patients with severe injury of the kidney recovered, while two-thirds of those patients recovered who had suffered an injury of the kidney without serious complication.

Of a total of 67 deaths, 10 occurred the first day, 13 others in the first week, 21 others in the first two weeks. The causes of death were: shock, 5 times; hemorrhage, 30 times; suppuration, 27 times; chronic nephritis, 3 times; calculus and oedema of the lungs, 2 times. No doubt rupture of the kidney in a mild form occurs with such frequency in general as to greatly reduce these mortality percentages.

Treatment—The primary objects in the treatment of these accidents is first to save life and secondly to save the injured kidney. The threatening symptoms of shock and hemorrhage require immediate attention. The patient should be kept quiet, with the head low. Morphine should be given to control the pain, but not in such dosage as to mask the important signs of hemorrhage. An ice-cap may be applied in the region of the kidney. Stimulants should be administered with great caution, even though there is collapse, lest they increase the flow of blood. Any means which raises the blood pressure, may appear to do good by reducing the cerebral anaemia, but may increase the loss of blood, and thus do far more harm than good. On the other hand, fainting and quiet reduce the blood-pressure, and favor the formation of thrombi in the injured vessels. Therefore, shock which lasts an hour,

and during this period reduces to the minimum the blood-pressure, may save the patient from a fatal hemorrhage. A constantly increasing tumor in the loin, a pulse growing steadily smaller and weaker, and a deepening pallor, make it evident that death will occur in a short time unless the hemorrhage can be checked. Such relief can, of course, only be afforded by exposure of the injured vessel and its ligation or compression. This principle of treatment seems plain, but is another matter to be accurate in selecting the most propitious hour for surgical intervention.

At first surgeons had no thought to save a patient from fatal hemorrhage except by removing the injured kidney, but in 1891 Keetley showed that under certain circumstances exposure and tamponing of the renal pelvis would suffice to stop the renal hemorrhage, while saving the kidney. This plan of procedure has also been followed many times with success, and while it is doubtless true that failure by this method as well as by extirpation of the kidneys are not always reported, still both of these operations are of such a character as to merit commendation under proper circumstances. Indeed, the indication is now so clear that when hemorrhage after injury continues for a few hours, it is the duty of the surgeon to expose its origin. If the peritoneum is probably uninjured, the kidney should be cut down upon through an incision in the loin. If there is reason to suppose that the peritoneum is ruptured so that blood and possibly urine enter freely into its cavity, the transperitoneal method is preferable.

If it is necessary to tie the renal artery the kidney will thereby become a useless organ, and should be removed. If a portion of the kidney—for example, one of its poles—is torn away from the body of the organ, while the main portion is well supplied with vessels, the lesser portion should be removed and the hemorrhage controlled by clamps or sutures, or packing. Faced by such conditions with the added difficulty of controlling hemorrhage even by gauze packing, I believe that in the majority of cases of this type the surgeon will wisely do nephrectomy.

In most cases, however, the hemorrhage is not such as to make an immediate nephrectomy necessary. Usually the bleeding is moderate in amount, though it may continue for days or weeks until the progressing anaemia makes an operation advisable. Under such circumstances one is apt to postpone operation in the hope that a hemorrhage may stop of itself. It should not be forgotten that the proper time for intervention can easily be passed, and that there is a certain risk of secondary hemorrhage which may cost the patient his life unless by prompt operation at the time of its occurrence the surgeon is fortunate enough to avert this disaster. Such a secondary hemorrhage may occur some

time after the primary bleeding has ceased. Therefore, during the first two or three weeks, if operation is not decided upon, all the means should be at hand for an immediate operation should this become necessary.

Statistics show that many patients have died from suppuration of the injured kidney and of the tissues in its neighborhood, but they also show that such an unfortunate termination may often be avoided by proper surgical procedures even after the suppuration is well developed. Such an operation does not present the difficulties of a nephrectomy for hemorrhage, and the surgeon can proceed slowly and carefully. It will usually not be practical to save any portion of the kidney. It is far more important to avoid infection of the other kidney, and hence extirpation of the injured and suppurating kidney is demanded whenever an increasing tumor in the lumbar region, fever, and aspiration of fluid show that there has been an extravasation of urine which has been followed by sepsis or gangrene.

Judd (*Rail. Surg. Journal*—1918), reporting 10 cases, regards infected hematoma as a serious condition. In 4 or 8 cases in which large abscesses formed, he found it necessary to remove the kidney later and suggests that early operation might have saved the kidney in these cases.

In the experience of most surgeons, gradual disappearance of the exudate around the kidney has been seen to take place and operation thus avoided. However, Judd's experience clearly indicates the risk involved in adhering to this expectation. In general terms one will do well to deal with rupture of the kidney as a surgical problem, deferring operation until the patient has bridged the period of shock unless there is apparent danger of death from hemorrhage.

Under such circumstances operation should be immediate and expeditious, preceded or followed by blood transfusion. When, by careful observation of the patient, waiting appears to be within the limits of safety, the time elected for intervention, if it is to be carried out at all, will depend upon the changes in the clinical picture. A relatively low temperature and pulse with a moderate leucocytosis and a discomfort that does not merge into actual pain may point to safety without operation. On the other hand, a temperature that climbs or remains elevated and irregular, increase in the white count and more important still, the degree of affliction manifested as more marked by the patient himself indicate the wisdom of operation without undue delay.

Finally, no blanket set of rules can be offered as a true guide for the treatment of cases of ruptured kidney. Medical and surgical principles are not altered in these cases. Good judgment and some special knowledge constitute the best equipment for dealing wisely with the individual case.

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DISCUSSION

DR. JOHN H. CUNNINGHAM, Boston: I shall confine my remarks entirely to the feature of treatment. I think the crux of the whole matter of treatment is summarized in the last paragraphs of Dr. Truesdale's excellent paper. As he has shown, by two illustrative cases, patients with a ruptured kidney fall into two distinct groups--

1. Those with progressive, concealed hemorrhage.
2. Those with limited, concealed hemorrhage.

The first group is the more serious because the hemorrhage is progressive into the abdominal cavity or behind the peritoneum, through rupture of the perirenal fascia.

In the second group, the perirenal fascia remains intact, thus limiting the hemorrhage to the cavity about the kidney. I believe the distinction between these two conditions can usually be made but multiple injuries often complicate the future behavior of the case.

While the progressive, concealed hemorrhage requires immediate operation and is a most critical situation, the instances where the hemorrhage is limited to the perirenal space do not require immediate operation.

Those who have much to do with traumatic surgery are often perplexed with the question whether there is a traumatic kidney or injured intra-abdominal organ, following a blow on the back or abdomen. Especially is this so when the patient is in shock as is usually the case.

The presence or absence of blood in the urine, either in a voided or catheter specimen, is important information. I recall a patient in whom there was a rupture of the kidney and a diagnosis of the true condition was not made because there was no blood in the bladder. The patient was in a state of shock and the surgeon assumed that there was an intra-abdominal hemorrhage. The abdomen was opened and no blood or injury of the intra-abdominal organs was found. The patient died, and at autopsy it was found that the patient had bled to death behind the peritoneum.

I agree that the diagnosis between a progressive, concealed hemorrhage from a ruptured kidney or from injury to an intra-abdominal organ may be difficult or even impossible because of the condition of shock in which these patients usually come under our observation; the diffi-

culty being the question whether the shock is due to trauma or hemorrhage. Careful observation of the patient's condition for a short time will often determine this point. If the shock is traumatic, the symptoms will subside and the physical signs improve, while if progressive hemorrhage is present, the reverse is true and operation is imperative. In such cases transfusion should be employed. In most cases, removal of the kidney is required. In some, when the fracture of the organ does not include the kidney pelvis or ureter, the organ may be saved by proper packing. In one patient I arrested the bleeding by applying the instrument employed to grasp the kidney and leaving it applied for a few days. (I do not recall the name of the instrument, but it is not unlike a small obstetrical forcep.)

The second group, the limited concealed hemorrhage group, are usually observed in a condition of acute shock, which gradually subsides, with improvement in the physical signs. There develops a tumor mass in the kidney region and the abdominal signs of injury are sometimes persisting for a day or more, and then gradually disappear.

I, personally, have come to feel that unless the situation is obviously one of progressive hemorrhage, we had better wait. I believe that when the hemorrhage is confined to the perirenal space, the symptoms will subside and the kidney may be saved. The clinical course in those cases which we have not operated upon show improvement in the condition of shock; there develops a palpable tumor in the kidney region; and the X-ray portrays a large mass, resembling a large kidney, but which is, in reality, not only the kidney shadow but that of the blood confined in the perirenal space. Some of the cases have gone on to complete recovery, the blood about the kidney being absorbed. Others have gone on to suppuration, and operation many days after the injury has been necessary on this account. In most of these cases the kidney has been saved and has remained as a good functioning organ. In a few instances we have had to remove the kidney in this delayed operation because of the extensive kidney injury and the destruction produced by the suppurative process. In these cases I feel that the operation was attended with great safety to life because we did not operate in the condition of shock and the other kidney had some time to take on the work of the injured organ.

As is well known, suddenly throwing the work of both kidneys on one, is a serious matter, and if even a day can be given to the uninjured organ to take on the vicarious activity, the seriousness of the situation is greatly diminished. I feel that I have been guilty of removing kidneys which could have been saved and unless the indications of progressive hemorrhage is

definite, I prefer to pursue careful, watchful waiting; improving shock; giving time for the uninjured kidney to take on its increased work and subsequently operate if improvement does not take place satisfactorily or suppurative results.

DR. W. W. TOWNSEND, Burlington, Vt.: I would like to say a word regarding watchful waiting in ruptured kidneys.

There is no question but that a great many of the symptoms due to a rupture of the kidney will subside and the patient get well, however we have had a few experiences which make us believe that there are some after symptoms,—symptoms appearing later on in life as a result of watchful waiting and lack of free incision to evacuate the extravasated blood, which is left to be absorbed with subsequent contraction of renal and peri-renal tissue with distortion of renal pelvis or ureter, causing hydronephrosis and renal colic—the symptom that brings the patient to the urologist. Within the last forty-eight hours we have had a patient with a pyelogram showing a large hydronephrosis, and in our opinion it was due to an aberrant vessel, but at operation we failed to discover such. The kidney was embedded in strong adhesions and the ureter was obstructed by a band just below the uretero-pelvic junction. In the history taken by the resident, mention was made of a fall thirteen years previously, but preoperative interrogation by the resident failed to bring out the information obtained, postoperatively, from his mother to the effect that at the time of the fall blood showed in the urine for several days.

DR. STEPHEN A. MAHONEY, Holyoke: I would like to ask the relation between perinephritic abscess and injury to kidney from an industrial standpoint—whether perinephritic abscess coming on in two weeks after the strain or blow on the kidney region is possible.

DR. JOHN W. KEEFE, Providence: I have been interested in Dr. Truesdale's presentation on account of some cases of rupture of the kidney that I have come in contact with; and it would seem to me that it is one of the difficulties that we occasionally meet with where we have

to use, what we speak of as "surgical judgment" which is based, I suppose, on our reading and our experiences with patients. In this type of accident the man with the best surgical judgment, to my mind, will have the best results.

I don't believe that you can say that watchful waiting is a bad thing; and on the other hand, I believe there are types of cases that should be operated upon during the period of shock. I recall a young man where you could readily make out fullness in the loin and he was in extreme shock, but with saline transfusions—at that time we were not then doing blood transfusions—the kidney was so lacerated that I removed it; but I was impressed by the extravasation of blood extending from the liver way down to the cecum. That man's life was saved by immediate operation.

Two years ago two school girls, each 16 years old, were coasting, and their sled ran into an automobile; they were both unconscious and both within an hour passed bloody urine. With one patient the third day I opened in the loin and found an extravasation of urine tinged with blood. The other I operated upon a week after the accident when I opened her loin and found bloody fluid. There was a blood clot and some urinous odor, and I believe if you took those two children to the operating room and operated during the early period, it would have been unwise; as both made good recoveries by making incisions in the loin and not exposing the kidney to any great extent.

DR. P. E. TRUESDALE, Fall River (closing): In answer to Dr. Mahoney I think there is very little doubt, that, in some cases of ruptured kidney, the urine that is extravasated into the perinephritic pouch becomes suppurative, and perinephritic abscess results. That isn't the only cause of perinephritic abscess but that is a common cause.

As far as the watchful waiting is concerned it does seem to me that watchful waiting is the thing to do when one knows when to employ it. If he can exercise a policy of watchful waiting without losing a life, it is all right to use it, otherwise not.

BOSTON MEDICAL HISTORY CLUB

DR. ROBERT KNOX AND THE EDINBURGH MURDERS*

BY WILLIAM H. ROBEY, M.D.

UNTIL 1832, the physicians and surgeons of Great Britain were on the horns of a dilemma. They were expected to perfect themselves in their art, and were held accountable for their acts, yet the natural road to perfection was closed by an ungenerous law and a sentimental

public. The British medical schools were denied an assignment of human subjects for the study of anatomy, except those of executed criminals and the bodies of unclaimed suicides and victims of violent deaths. The legal supply was far below the demand and, even with the aid of the "Resurrection" men, did not furnish enough material for the requirements of the

*Read before the Boston Medical History Club, January 28, 1927.

medical schools. The stealing of dead bodies was a practice openly encouraged by the professors of anatomy, although it excited universal disgust.

During the Napoleonic wars the students were prepared so hastily for service with the army and navy that the subject of anatomy was grossly neglected, with the result that men frequently entered upon the duties of assistant surgeon without ever having dissected a human body. Upon the cessation of the war young men again flocked to the medical schools and the need for cadavers became greater than ever. Up to this time the highest price ever paid for a body was four guineas, but, with increased demand, came increased risk and a request for higher remuneration, which the teachers of anatomy were forced to give. The ranks of the "Resurrection" men became greatly augmented and these soulless rascals were frequently apprehended and severely punished, yet they pursued their nefarious trade because the price of a body meant whiskey and temporary oblivion. The professors and their assistants were not over particular in their inquiries into the cause of death, nor the source from which a body came, and even if they had been, the Resurrectionists always had a plausible story to allay suspicion. It was understood that all bodies were obtained surreptitiously. The Resurrectionists attempted to secure as fresh bodies as possible, for the better the state of preservation, the better the price paid by the anatomists. They were generally brought to the medical rooms at night and immediately consigned to a damp cellar. The assistant in waiting, tired and worn with his many hours of labor in a tainted atmosphere, could hardly be expected to make too close a scrutiny of a corpse when all that was required to be known was the probable age, the sex, and its general applicability to the needs of the class.

While the public was from time to time scandalized and the law makers remained unmoved, the teachers of anatomy, with their increasing classes groaned under their limitations. Neither poor nor rich were safe from the body snatchers, whose numbers and activities were so on the increase that the rich often kept a night guard for weeks at the grave of a relative. In the Government's investigation which followed the Edinburgh murders, one "Resurrection" man said—"A man may make a good living at it if he is a sober man and acts with judgment. The greatest part of the men that have lately got into the business, they are nothing but petty common thieves. I should suppose there are at present in London between forty and fifty men that have the name of raising subjects, and that there is but two more, beside myself, that got their living by it. If you are friends with a grave digger, the thing will be all right to know bodies to get,—if you are

not, you cannot get them. It was only one year I got one hundred bodies."

Public abhorrence of the system, however, the necessity for the private guarding of graves, the vigilance of the police and the talkativeness of the "Resurrection" men when in liquor, made the business extremely hazardous. Captures and severe punishment were not infrequent. The versatile Andrew Lees, living in a house adjoining a cemetery, evolved a safer plan. He had only to slip through the window on a dark night, snatch a body from its grave, and, quite unsuspected in his regular capacity of a carrier, carry it to the medical school the next day with other packages.

Newly dead bodies were not so uncommon in the anatomical rooms. The Resurrectionists were always on the qui vive for dying persons without friends, and to learn all about their history, and, if possible, to personify the individual of whom the deceased had spoken in his or her last moments. Marvelous were the expedients resorted to by these false claimants of the unprotected dead, and equally marvelous their success, considering that all the various personifications of character rested with so small a group as three or four men, one of whom had to profess direct kinsmanship with the deceased. Lees was the leading spirit in the funeral line. He was a tall, gaunt fellow, with a long pale face, the muscles of which were exceedingly pliable to any emotional need—tragedy, comedy or farce. Grotesque in look and gesture and wearing a cast-off suit of black that had not been made for his "shrunk shanks" the students named him "Merry-Andrew"; and over his cups he could maintain the fool's part well. (This hardened sinner drank sixteen glasses of raw whiskey daily and on great occasions he was equal to as many pints!)

When assuming the character of mourner his appearance was dismal enough; his pale face, with dropped jaw, set off by the habiliments of grief, and his odd manner, far surpassed any theatrical get-up. His approach to the house of death was that of a stranger from the country timidly enquiring for a certain house, on entering which, his bleared eyes, that would have made the fortune of a London "mute", became suffused with tears. After dwelling on the virtues of his "dear relative" he would at length intimate that he wished to convey "the remains" to the family burial place in the country, and that he and some friends would return with a cart and coffin towards evening. His "friends", all in the same line, were, first, "Spune" as he was called,—a little man who shaved very cleanly, and looked as demure and resigned as a Methodist preacher—so saintly, and barring his greasy black clothes, of truly "sweet savour." Secondly, Mowatt, who got the name of "Mouldiewarp" (moldwarp) from his successful imitation of the mole in burrowing into the earth.

Thirdly, the mock minister, or clergyman, who was personified by a deep-dyed vagabond who called himself Howard, in the hope of hiding his iniquity under a noble English name. Dressed in a black suit, too seedy for even a curate, and with a white choker, the "praying Howard" officiated *à la mode*, improving the occasion by calling upon those around the bier to reflect on the uncertainty of life and the need of a spiritual regeneration, for man was but a vain shadow; in using these scriptural words he looked with becoming gravity upon the thin form of Merry-lees, as if to draw the moral, or to warn his friend! The group of mourners having played their part, the funeral cortege moved toward the suburbs. As soon as night and circumstances favored the change of scene, the black curtain was raised; the *dramatis persone* mounted the cart, returned to Edinburgh and lost no time in transferring the body to the anatomical rooms. With cash in hand the quartette made a night of it and Merry-lees now seen in his character of the laughing Mercutio, made the welkin ring, 'til he had put each of his "friends" below the table dead drunk. The same parties played the same game at the Infirmary and got several unclaimed bodies. They often dragged in their women coadjutors to aid in the deception practised on the officials of public institutions.

Burke and Hare, the two scoundrels whose machinations roused the British Parliament to action, could hardly be called Resurrection men since their methods were quite different. They never robbed a grave, but found a much easier way.

William Burke had been in the militia in Ireland; afterwards he was a day labourer and cobbler in Scotland for nearly ten years. In company with a woman named Helen McDougall—a hard-faced person of disreputable life—he came to Edinburgh and dwelt in a tramps' boarding house in Tanner's Close, in the West Port. The landlord of the house (by virtue of his conquest of the affections of the landlady) was a countryman named William Hare. Because of the impediment of two other living husbands, Mrs. Hare did not have clear title to the name.

William Roughead describes the four in these terms: "M'Dougall, a Scots Presbyterian, was of a dour and sullen disposition, morosely jealous and gloomily wicked. Mrs. Hare, like her lord, an Irish Catholic, was more vivaciously vicious, more actively malign. Of the men, Burke, crafty and cunning, possessed of a surface geniality which, combined with plausible, insinuating manners and a touch of religious hypocrisy, was apt to delude the unwary. Despite his innate cruelty he was occasionally visited by some compunction for his crimes, and it is satisfactory to know that, like a more majestic murderer, Macbeth, his nights were full of ter-

ror. Here, on the other hand, was frankly *la bete humaine*, ferocious, violent, quarrelsome and brutally callous to the consequences of his acts. It is hard to tell which couple played lead in the ensuing drama, but Burke seems to have been the more dangerous, because mentally the abler man, as Mrs. Hare was clearly the abler woman."

On the 29th of November, 1827, an old pensioner died in Tanner's Close, West Port,—he died in debt of four pounds to William Hare, in whose lodging house he had lived, and Hare saw but one way of reimbursing himself, and that was by disposing of the old man's body to the doctors. Hare found a ready accomplice in William Burke. They removed the body from the coffin, a bag of tanner's bark taking its place,—the lid was screwed down again and all made ready for the bearers. A number of sympathetic neighbors attended the funeral, little dreaming that they were mourning over tanner's bark, and deal boards. That same evening Burke and Hare stealthily took the body in a sack to the rooms of Dr. Munro, but meeting an assistant who happened to be a pupil of Dr. Knox, the rival professor, they were advised to try Dr. Knox, 10 Surgeon's Square. Burke and Hare were delighted to learn that the price paid for a body was sometimes as high as ten pounds. They received seven pounds, ten shillings, wealth to them, and a hearty invitation to come again. Next day there was merriment and drinking in Tanner's Close, but as the money dwindled the firm began to look around. It would be opportune if another lodger happened to die, but if not, some other means must be found to continue the supply. If you want the golden apple you must find a tree and shake it.

Since no one died from natural causes, Burke and Hare, being men of spirit, decided to assist on their long journey such persons as could be enticed into their den. Burke was a plausible fellow and could make himself very agreeable to strangers. When he met what he considered a suitable person he entered into a conversation which usually concluded with an invitation to dinner. The firm specialized in persons whose disappearance would cause no inquiry. They knew the importance of avoiding too marked signs of violence, hence their method was to entertain their guest with whiskey, urging him to drink until he was comatose. Then they dragged him to a bed, and while Burke clapped his hand over the victim's mouth Hare assisted by sitting upon his chest. Burke and Hare usually managed to remain partly sober and during the dancing and wild singing which disturbed the neighborhood, often late into the night, pretended to quarrel, and thus added to the disturbance. If the victim happened to be a woman, the amiable female partner of one of these wolves was apt to accuse her of undue familiarity with her so-called husband. The body was hidden and at night was stuffed into

a sack and carried to the rooms of Dr. Knox in Surgeon's Square.

In all they murdered, in less than a year, sixteen persons according to their own statement, although some have placed the number higher. We will not give the entire list, but there was Ann M'Dougall, a cousin of Helen M'Dougall's former husband. Burke, with natural delicacy, told Hare that as the lady was in some sense a distant connection, he did not like to take the lead in this case, so Hare stifled her with Burke merely assisting. The partners became so bold that they stated at their trial that had they been allowed to continue a little longer, they would have attacked people on the streets. The three last victims brought their crimes to the surface, two of them being well-known street characters in Edinburgh. The first of these was a young girl of eighteen, Mary Paterson. Mary was very pretty, well known on the streets of Edinburgh where she plied her trade, and liked by a great many people, who enjoyed her merry laugh and admired her loveliness, if only from a distance. One day Burke met Mary Paterson, with her friend Janet Brown, in a dram shop. In his usual manner he invited them to accompany him home where a hearty breakfast and two bottles of whiskey were served. Janet did not relish the scene and left after a time, leaving Mary asleep at the table. Later she returned but was told that the Paterson girl had left some time before. She had left, in a sense, for at that moment her body lay dead in the bed, covered with a sheet. Janet could not be enticed to stay but went in search of her friend. In the afternoon, Mary, her body still warm, was carried to the usual place where a medical student, who had been in her company a night or two before, instantly recognized her.

Another victim was Daft Jamie, an over-grown feeble-minded boy, often followed and teased by the children and known to many people in various parts of Edinburgh. Jamie could not be induced to drink much and when the time to kill him a hideous scene occurred, in which Burke had to call to Hare to help him put down the vigorous resistance of the poor boy.

The last victim was a woman named Docherty, just arrived in Edinburgh from the country. Burke met her one evening in a tea shop, where she was buying a few supplies. He fell into conversation with her, found out where she came from, and ended by claiming a distant relationship and inviting her to spend the evening at Hare's. Late at night when all were drunk, a brawl ensued during which the Docherty woman fell upon the floor. Burke and Hare stifled her, pushed her body under a table, where it was discovered under some straw in the early morning by two temporary lodgers named Hill. The quartette attempted to detain the Hills, but they succeeded in escaping and immediately informed the police, who arrested the firm. Hare turned

State's evidence. Nothing could be definitely proved against the woman, but Burke was hanged in the public square, more than 20,000 people being present. There were loud cries of "burke him", hence the verb "to burke" which has been in the dictionary ever since, meaning to stifle or to do a thing by stealth.

The result of all this was of vast importance to the medical profession. The public was aroused from its lethargy and in 1832 Parliament passed an act regulating anatomical dissections and struck a death blow to the Resurrection men, although they probably continued their trade for some years after.

The anatomist who received the most notoriety as the result of the Edinburgh atrocities was Dr. Robert Knox, professor in the medical school of Edinburgh. Knox came of a Scotch family of cultivation. His grandfather was a prosperous farmer who sent his son to Edinburgh, where he proved himself to be no mean mathematician and scholar. His eighth child, and fifth son, named Robert also, was born September 4th, 1791. He was a good-looking child, but at an early age he had small-pox in a virulent form which deprived him of the sight of his left eye. After a good training at the High School, he entered medical classes in Edinburgh, November, 1810. His literary and historical studies, his partiality for the collateral as well as the direct medical sciences, and not less his rhetorical powers, led him to take part in the discussions of the learned societies assembled under the shadow of his Alma Mater. Prior to his graduation he was twice president of the Royal Physical Society. It is said that on his first examination for the M.D. degree he was plucked in anatomy, which so aroused his mettle that he changed his teacher, abandoned the rhetorical encounters of the societies, and graduated in 1814 with anatomy at his fingers' ends, and a very excellent thesis on the effect of exercise and narcotics on the pulse, to his credit.

In 1815 Knox received a commission in the army as Assistant Surgeon. His five years of active duty were most profitable since he studied the various aspects of camp and field life, the effects of housing on the spread of disease, wound infections and the problems of military sanitation. While on a transport, his time when not occupied with the care of the sick and wounded, was given to meteorological studies, and in camp to biological and anthropological investigations. He noted the habits of wild animals and shot—he was a skilled marksman—almost every variety of beast in the wilds of the country surrounding his military station; he employed men to skin the beasts and to aid him in the preparation of their skeletons. He was also a very capable surgeon and performed several difficult operations which others had declined. He stood in special favor with the Dutch settlers who invited him to become chief surgeon of the Dutch

Free States. Had he remained a dozen years at the Cape there was no post of honor at the hands of the colonists which he could not have obtained.

From his student days, and throughout life, his investigative type of mind was ever busy and his notes and published papers were numerous.

Knox became Fellow of the Royal Society of Edinburgh on December 1, 1823. He did some practice and might have done more if his anatomical dissections had not occupied much of his time. In May, 1826, he was appointed Conservator of the College Museum, at a salary of one hundred and fifty pounds a year. Dr. John Barclay for thirty years had built up the fame of his Anatomical School. His lectures were greatly in advance of his time and helped to sustain the character of the Edinburgh school, but at sixty years of age he began to feel the need of a successor, and the brilliant young Knox was selected to take over his classes. His first course of lectures on anatomy and physiology, delivered in 1825-26, was a great success and fairly sufficient to establish his character.

Lonsdale gives a description of Knox as slightly above the middle stature, his wide chest, powerful shoulders and rather long arms presenting something of the physique of the wrestler. His carriage was upright, his walk firm and soldierly, and both body and limbs showed a free and lithe-some action. The rise on the toes and the apparent restlessness of both his features and framework, bespoke the versatile Frenchman more than the "canny Scot." The atrophied condition of the left eye, the large nose, and full mouth were heightened in force by strong lines, and a coarseness of features incident to the worst form of small-pox. He had a strikingly fine head, that shone in all its baldness; the prominence of the supra-orbital region and eyebrows served to place the frontal development in high relief and to make the cranial outline appear more dome-like and massive. His perfect eye was perfection itself and an excellent index to his passing thoughts. Like Lord Brougham, whom he resembled in plainness of visage, the muscles of Knox's face were seldom at rest when his brain was occupied. These involuntary twitchings were far from agreeable, especially those which affected the under-lip, the crossing of which from side to side produced a kind of smacking noise. Co-ordinate, or alternating, with these facial movements, the neck was extended, the shoulders raised and the arm drawn to the side.

If Nature had been less kind in her gifts to the outer man, she was lavish in her bestowals upon the social and intellectual Knox. However harsh, if not forbidding, in personality, his courtesy and conversation atoned for all. He was bland in manner, and full of pleasantry; he had a gentle, agreeably-toned voice, and a ready persuasive tongue that made a captive of every lis-

tener who could appreciate that colloquial eloquence.

Dr. Knox was wonderfully gotten up in the way of costume, and perhaps the only lecturer who ever appeared before an anatomical class in full dress. Being a well-made person, his tailoring was all the more effective for his display as "the gloss of fashion and the mold of form." A dark puce or black coat; a showy vest, often richly embroidered with purple, across which gold chains hung in festoons; a high cravat, white or in coloured stripes, and the folds of which were passed through a diamond ring; a prominent shirt collar, delicately pleated cambrics, watch-seals and pendants set off by dark trousers and shining boots completed his outer man—significantly gay, if not loud, in coloring. Knox, in the highest style of fashion, with spotless linen, frill, lace and jewellery, standing in a class room amid osseous forms, cadavera and decaying mortalities, was a sight to behold and one assuredly never to be forgotten.

The door of the lecture room was seldom more than half open when the bald head and the bowing attitude of Knox became visible, as if he were solicitous to bestow a smiling recognition on the occupants of every bench of the amphitheatre.

Placing his watch and seals on the table, he would brace himself for his work and again survey the class, as if to be sure that everyone was ready to go along with him. His oral communications to his classes were among his happiest efforts. Possessing high natural endowments, he strove for perfection in a sphere seldom attainable—that of public lecturing—and he achieved an excellence that far surpassed all his contemporaries. Words cannot convey Knox's superiority in this respect. Some lecturers walk unconcernedly to their desk and read off-hand; some are condescending, others are brusque in manner. The exits and entrances of Knox were alike graceful and exceedingly characteristic; nor did he for a moment during the hour of lecture lose his suave demeanor and high respect for his class as a body of gentlemen.

No medical lecturer in the United Kingdom ever enjoyed such public confidence as Dr. Knox. From 1826 to 1835 his students annually averaged 335, and in the session of 1828-29, he had 504 pupils. This last period was during the time when the populace was enraged over the murders of Burke and Hare, and it was hardly safe for Knox to be seen on the streets, yet his loyal pupils flocked to him as never before. His old lecture room accommodated only 200, so that he often lectured to three groups in successive hours, but seemed little affected by the arduous task, so thoroughly did he love the work. He courted popularity and it came as a flood.

When the storm burst, and ruffians, urged on by half-clad women, mad with drink, burned his effigy in front of his house, they would have

burned him too if they could have found him. Knox was brave; armed under his military cloak, he walked out of his rear entrance, mingled with the mob and found his way to a friend's house, where they were more perturbed to see him than he was in coming.

It was thought by the citizens of Edinburgh that Knox was not innocent of the sources of so many *fresh* subjects, but a committee of leading men reviewed the circumstances and concluded that he was innocent, although there is a veiled hint that he might have discovered something amiss had he taken the trouble to do so. His students never lost confidence in him and during the years 1828-29 his classes were larger than ever. He continued his anatomical lectures until 1835. In 1841 Dr. Knox offered himself for the Chair of Physiology in the University of Edinburgh, but was not appointed despite his remarkable abilities and fitness for the professorship.

From 1842 to 1846 he was unsettled, moving to and fro on both sides of the Tweed; now living with a pupil, now searching for employment in London, he was at length induced to give a few lectures on the "Races of Men." This peripatetic philosophizing made him known to the general public and helped his finances. His letters of this period express disappointment, and no wonder. Possessing the highest gifts of intellect, he obtained no acknowledgment in the ranks of his own profession; the greatest teacher of anatomy, he could find no chair and no lectureship in the mighty metropolis.

For a time during 1845 he was engaged by Dr. Felix Thibert at Thibert's Museum to show from wax models the more instructive parts of the human anatomy, to popular audiences. However profitable the pay, the engagement must have been of a most irksome nature.

In 1846 he sought a Government appointment, his claims being supported by Sir George Sinclair and other men of prominence, but being out of favor with the Whig party, this was unsuccessful.

His lectures on the "Races of Men" caused a good deal of a sensation by their novelty and led to no small amount of controversy in the press. He published them under the title of "The Race of Men; a Philosophical Inquiry into the Influence of Race over the Destinies of Nations."

In 1854 his son Robert died from heart disease, this being a great blow to the Dr. Knox, from which he did not recover for many months.

When 63 years of age he applied to the War Office and Admiralty, to be sent to the Crimea, or to serve as a Staff-Surgeon. In spite of his years he was as active as ever, and his application was well seconded by numerous friends, but again political favoritism defeated him. Considering the civilians appointed and the class of medicals sent out to the Crimea, as well as the advanced age of many of those in command both at home and in the field, it said

but little for those in office that so experienced and distinguished a man as Knox should have been refused.

In 1856 he was appointed Pathological Anatomist to the Cancer Hospital at Brompton, and during the following years continued writing and publishing. In 1860 and 1861 came a measure of recognition in his election as Honorary Fellow of the Ethnological Society of London—"the highest honor the society had in its power to bestow," and also his election as Foreign Corresponding Secretary of the Anthropological Society of Paris, being the first foreigner to obtain this honor.

Letters of this period show that he was busy collecting facts "On the Antiquity of Man on the Globe." Toward his last days he contemplated publishing a large work in two volumes with the title, "Contributions to the Scientific and Educational History of My Times."

A more fertile pen than Knox's was seldom, if ever, wielded, but unfortunately it was too often driven by the pressing necessities of life, and occasionally in a direction but little consonant to its master's feelings. His heart was hourly linked with an intense regard for the advancement of professional knowledge, and he once said, "I would rather be the discoverer of one fact in science, than have a fortune bestowed upon me." Even up to his last days his pen was active in controverting the errors of others and in the advocacy of his own opinions. He left heaps of manuscript written on small pieces of paper, and in the most perplexing manner on both sides of the sheet; and as if to make confusion more confused, he would often carry on two subjects on the same sheet of paper; the writing on one side being arranged vertically and on the other side longitudinally.

In his later years Knox took to practice in the Hackney district, and, marvelous to say, did a great deal in the obstetrical department. Picture him trying to fill the historical page, tracing the growth of dynasties and recording the progress of race and civilization, whilst his ears were dinned by the voluble Mrs. Gamp and puerperal groans. Ladies in expectation would often "expect" too soon in order to secure the services of the delightful doctor in good time, and would not infrequently refuse to let him leave until several days after the event. Having his papers with him and surrounded with home comforts, he had the pleasure of complying with their wishes as well as working in comfort.

His death came on December 20, 1862, at the age of seventy-one years. Throughout his life he undoubtedly suffered from his unfortunate association with the scandals of 1828-29. The religious sects probably never quite forgave him, although many recognized his ability. That misfortune, together with political intrigue, and professional jealousy, prevented the full fruition of a life which should have been crowned with honor.

REPORT OF THE MASSACHUSETTS GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES*

BY SALLY JOHNSON

JANUARY 12, 1927

Chairmen, Members and Friends of the Massachusetts General Hospital Training School for Nurses:

WHEN the first formal graduation exercises of this school were held in 1903, Pauline Dolliver, the Superintendent of Nurses, read a report on its activities. At every subsequent graduation, the principal of the school has given a brief report. The alumnae look forward to this with interest, and are grateful for the custom—a custom not common to many graduation programs. We of the school realize that such a communication holds less interest for our guests than for us, but there are so few opportunities to acquaint lay persons with the work of the Training School, that we welcome this opportunity.

Probably those of us in the Training School Office will remember this past year as being the one when we again had a true waiting list. Applications in June, for a class which cannot be admitted until September, do not constitute a true waiting list, although they are sometimes so designated. Neither are letters of inquiry true applications, although they are often so called. What does constitute a true waiting list is having more eligible applicants for a given class than can be admitted. Our housing and teaching facilities will accommodate a group of seventy students in September, and fifty students in February, no more. On June 1, three months before the entrance date of the Fall class, seventy students were appointed. On November 1, three months before the entrance date of the Spring class, fifty students were appointed. Therefore, since June 1, there has been a true waiting list of applicants. Some of the original applicants always resign when appointments are made from the waiting list. Our records show that the appointment list shrinks one-third.

We had places sufficient for these additional students. In May we re-opened our remodelled children's wards, now numbered 10 and 12, with a total capacity increase from twenty-four patients to forty-one. More students are now required, not only because of increased capacity, but also because of the technique which is now possible. To nurses of a decade ago "pt." (if one could escape with the use of an abbreviation, meant "patient"; now "p.t." might mean "perfect technique." While we do not claim that we have accomplished absolutely perfect technique, we have at least been able to occupy these remodelled wards for nine months without quarantine. (Of course, we are not superstitious, yet I know well enough that some of you

people working on the children's service have just knocked on wood.)

We had another place for these additional students for in June we opened wards 22 and 26, neurological wards of twelve beds each. To these wards have gone nine student nurses.

The total enrollment of the student body is two hundred and sixty-two. The maximum was reached on October 1 with an enrollment of two hundred and eighty-three. There are but two incoming affiliations. McLean has nine students here, and Faulkner five.

On the five-year program, in September, five came to us from Simmons College. There are two students in the fourth year of the program, and two have returned to Simmons for the fifth year. In passing, I wish to record that, last September, sixteen freshmen entered this five-year course at Simmons—the largest group ever admitted.

In the class of 1927 are five students graduating with a credit of time for college degrees. This credit of time was authorized with the expectation that the students would, within a reasonable length of time, procure post-graduate work. It will be interesting to know what these young women are doing five years from now.

We wonder why students elect this school. Questionnaires show that the majority make their choice because of the general standing of the hospital and the school. Alumnae and students recommend about one-third of our applicants. Physicians recommend about one-quarter. Many of these physicians are former house-officers. When some of these men were with us as house officers, their opinion of the Training School Office did not always appear to be such as would lead to their recommending applicants to us, but time and experience change their point of view.

The year has brought three outstanding achievements. The desirability of two has been expressed from this platform more than once. First, the occupancy of the new Medical Laboratory released the former Chemical Laboratory, which has been made into an especially well-equipped science laboratory for the School of Nursing. We doubt if there is a better one anywhere. The second achievement is the employment of a nurse with training in public health nursing, who can teach the public health point of view to the members of the school, who can place some emphasis on prevention, who can introduce the students to the health agencies in the Community, and whose major work is with the nurses in the clinics of our great Out-Pa-

*Delivered at the graduation of the 1927 class of Massachusetts General Hospital of the Training School for Nurses.

tient Department. A graduate of the class of 1924 was appointed early in the year to these duties, with the title of Instructor in the Elements of Public Health Nursing.

My friends have heard me talk so much about the need of a Physical-Social Director that I am sure they think the employment of such a worker is an obsession, or a "fixed idea," with me. But I believe it is not exactly a sign of insanity to feel that the school should have a person who would assume some responsibility for organizing athletics, for directing certain recreational activities, and for planning excursions to some of Boston's historical shrines. Today, no college or boarding-school with three hundred young persons in residence would think of being without some organized plan for directing recreation and sports—elements of school life which contribute to the health and happiness of the student body.

Years ago when we were on duty sixty-two hours a week by day, and eighty hours a week by night, there was neither time nor strength for outside interest. Today's students have more free time, but that free time is very irregular, and uncertain, and it is still difficult to arrange for recreational activities without a co-ordinator. Today the students are deeply interested in sports; the majority have been members of basketball teams. We, the school and the alumnae, are grateful to the Trustees, who have just authorized the employment of a Physical-Social Director. This is the third and main achievement of the year. The introduction of such a worker to our School of Nursing will lessen a percentage of parental objection. Parents say: "Our children are young only once. We do not wish their lives to be all idleness and play, but we do wish them to have their share of play. Responsibilities come fast enough." This student body gives the hospital excellent service. How seldom do we get a complaint concerning their individual work! They work early, late, and willingly. It is the hospital's job not only to teach these students nursing, but to make them as happy as possible, and to provide a measure of protection. The employment of this new worker in the school will go a long way toward discharging the hospital's responsibility for the happiness and protection of the student body.

There seems to be an opinion that the student nurses of today do not render the sacrificing service that was rendered by those of twenty years ago. It must be remembered that what is a sacrifice to the eighteen-year-old student of today was not a sacrifice to the twenty-five-year-old student of yesterday. Long before the young woman of twenty-five entered the training school, she had probably had her first Christmas away from home. She had already missed her first high school reunion, and each year these reunions hold less interest. "Junior Proms" were not such red letter occasions. She had recovered

from those devastating first romances, and "dating" had become less important to her happiness. I maintain that the students of today do sacrifice many pleasures to duty.

That the present generation is not devoid of personal interest and thoughtfulness may be proved by the following incidents:

It was not so long ago that a supervisor detected a foreign aroma arising from the ward diet kitchen. The diagnosis of foreign aroma is usually fudge, but this time, that diagnosis was incorrect. The aroma proved to be from dandelion greens gathered from the lawn near Ward E, in the process of preparation for an Italian patient. While we do not recommend the procedure, the young nurse was thinking solely of the desire of her patient.

When Miss Riley, long established in our Out-Patient Skin Department, has her vacation, she is relieved by a student nurse, who, like Miss Riley, visits the homes of the patients. One of the patients of this student nurse did not get the desired result from the treatment given, because she was putting her hands too much in water. The student remonstrated. The patient declared that there was no one else to do the laundry work, and she could not afford to have it done. For two weeks this student used her off duty afternoon to do that woman's washing. Since we sometimes hear that higher education makes one less willing to perform the humbler services of life, I wish to tell you that this young woman held a degree from a well-known eastern college.

Among the younger graduates, as well as among the older, are any number who are living on the least possible money expenditure in order that they may help educate brothers and sisters, or contribute to a home where illness or misfortune has reduced the income.

Such generous sacrifice on the part of our women went on before, and has gone on since Annie Best, of the class of 1895, contributed to the education of her nephew, Charles Herbert Best, of insulin fame. We would that all nephews could render as large a return. That is obviously impossible, but they could at least be as appreciative as Dr. Best. Miss Best has long since died. In honor of her memory Dr. Best still carries her large old-fashioned watch with a sweep second hand, such as nurses of a generation ago felt should be a part of their equipment.

One only needs to have the confidence of some two hundred and fifty young women students, and over twice as many young alumnae, to know that the members of the past generation of nurses were not the last to possess the virtues of sacrifice, unselfishness, and loyalty.

While the class of 1927 has prior claim tonight, we welcome, oh, so warmly and cordially, the alumnae who are here, and we send silent greetings to the hundreds of alumnae who are scattered all over the world. The bond of fel-

lowship which exists among our alumnae is precious. Our affection for the school and for the hospital is deep. This affection increases with the years, for it is true with this association as with others, even home associations, "that absence makes the heart grow fonder." When we are here under the hospital roof, we are hardly conscious of its protection, and of its stimulus. When we are far away we are more conscious of both.

I remember so well being in a very difficult position a few years ago. Many a morning I arose feeling that I never could surmount the obstacles of the day. Just as soon as I fastened on my school pin, something always brought me renewed courage. Our pin is a symbol of power, because if one practices the principles taught by the school which it represents, a measure of success is assured. The pin is also a symbol of protection, for if our personal and professional life is creditable, the school always stands behind us. The consciousness of that support is a stimulus to effort, for we must not fail the school. There is a great inspiration in the thought that, every morning, hundreds of women are fastening on this same school pin, and courageously facing a day of responsible service.

What are all these women doing? About once in so often we make a survey of our alumnae in order to reply to some questionnaire. One thousand seven hundred and thirty-four women have graduated. The whereabouts of forty, mostly among the older alumnae, are unknown. Eighteen, nearly all of the first twenty years, are physicians. Of the graduates in active duty, only thirteen are doing work other than health work. On the basis of per cent, thirty-seven out of every one hundred are married or retired. Ten have died. Sixteen are in private duty. Twenty-two are in institutional work, and eleven are in public health nursing. To repeat a very interesting fact, only seven-tenths of one per cent are engaged in work foreign to nursing.

This year several alumnae have returned from their work in foreign fields:—Alice Howard Keyes from Zululand; Maude Barton and Emeline Bowne from China; Sadie Metzler, from Syria; Teresa Kulczynska, from Poland; Geneva Leach, from Constantinople; and Mary M. Rogers, from India.

Every year two or three schools of nursing become part of universities. We are glad to find our graduates among the pioneers of this development. Harriet Friend, 1904, is Director of the School of Nursing at Temple University, Philadelphia. Mae Coloton, 1919, was appointed Director of the University of Colorado School of Nursing. Mary M. Pickering, 1916, has been appointed to the newly created chair of nursing at the University of California.

We rejoice in the number of alumnae who have pursued post-graduate study. We do not know

them all. We do know that singly, or in groups of two or three, they are studying in educational institutions all over the country,—West, in Oregon, where Sally Craighill received her Bachelor's degree this year; North, in Toronto; East at Simmons; and South in the Carolinas. Twenty-six of our graduates have attended Columbia University alone, during the year just closed. During the present semester there are more students from this school in the Department of Nursing Education at Columbia than from any other school, except Bellevue, which is located in New York City. That institution this year granted Bachelor of Science degrees to Mary D. Giles, 1913, and Harriet Wedgewood, 1919; Master of Arts degrees to Adelaide Mayo, 1917, and R. Louise Metcalf, 1920.

To the casual listener these graduation reports may savor of egotism. There is neither time nor place for egotism in organizations as demanding and complicated as this hospital and school. All experienced persons know that accomplishments are accompanied by failures. The task of preparing young women to meet, at all creditably, the ever-changing nursing demands of the community, and, at the same time, provide the entire bedside nursing care for a General Hospital of four hundred and thirty beds, in addition contributing fifty-five students to other departments and institutions, presents a problem, the size of which would kill any budding egotism.

Only for a few minutes on graduation night do we allow ourselves, or are we allowed by others, to forget the inadequacy of the manner in which we discharge this dual responsibility:—educating nurses, and providing nursing care for a great hospital. Here, for one brief hour, we indulge ourselves; we bask in the warmth of the good fellowship which results from the coming together of the alumnae and the school. We accept with satisfaction the part which we have taken in the work which the speaker surveys. Tonight, we of the home group review with pride the work of the alumnae, and you of the alumnae rejoice in the developments of the hospital and the school.

This occasion is comparable to those which bid godspeed to the departing, or welcome the return of base hospital units, or of any other group of earnest workers who have a definite mission to perform. On such occasions, all failures, handicaps, and disappointments are forgotten. Only the accomplishments, the joys, and the pleasant surprises are remembered. Fortunately, it is the pleasant events that memory retains longest.

The daily task of each of us, staff, administrators, alumnae and student body, calls for great wisdom, great endurance, mutual understanding and a common forbearance. It is doubtful if any other institution of its kind has a greater share of these qualities than this in-

stitution which we love and which we love to serve.

Humanity has no greater blessing than health of mind and health of body. Each of us is pre-

pared to make a personal and individual contribution to the blessing of health. This privilege which is ours, places us all among the most fortunate workers of the world.

MEDICAL PROGRESS

PROGRESS IN PROCTOLOGY

BY T. CHITTENDEN HILL, M.D., F.A.C.S., AND E. PARKER HAYDEN, M.D., F.A.C.S.

PROLAPSE OF THE RECTUM

STUDYING the literature one is immediately impressed by the number of operations described for Prolapse of the Rectum, which naturally suggest that as yet no satisfactory technique has been perfected for its relief. The paucity of cases reported by any one operator, and the few authors who give statistics of their final results, makes it difficult to decide upon the merits of the procedures described. The truth of the matter is that the etiology of Prolapse varies so much that an operation highly satisfactory under a particular circumstance may prove disappointing under slightly different conditions. Therefore, the type of operation should be selected to suit the case in hand, and very often a combination of two or three different methods is necessary to effect a cure.

Maes and Rieves (*Surgery, Gynecology and Obstetrics*, May, 1926) describe a new plastic operation for obliterating an abnormally deep cul-de-sac with relaxation of the lateral ligaments and levatores ani, that we think may be very useful in certain cases or as one step in the operation. We believe, as the authors have suggested, that it is frequently necessary to supplement this procedure by fixation of the posterior wall of the rectum to the hollow of the sacrum according to some of the accepted methods. Also, some plastic that constricts the relaxed anal canal helps in nearly every prolapse to make the operation more complete.

They describe their operation as follows—

"With the patient in the lithotomy position the prolapse is reduced, and an inverted Y incision is made, with the arms embracing the anus. This is deepened to expose the external sphincter. The anobulbar raphe is cut across, thus freeing the sphincter from the central tendon of the perineum. The anterior quadrant of the external sphincter is now excised, and the muscle immediately sutured end to end with U sutures of chromicized gut. The incision is deepened to expose the levator ani. Its medial margins are separated by blunt dissection with scissors. With a finger or a pack in the rectum as a guide, the anterior and lateral walls of the rectum as far as the lateral ligaments are exposed. This is best done by blunt dissection with a gauze covered finger. The prostate and

seminal vesicles are pushed forward. If the cul-de-sac is abnormally deep, the reflection of peritoneum from rectum to prostate will now be encountered and should be carefully pushed up until the prostate is exposed in front, and the adventitia of the rectum, as far as the finger will reach, behind. The superior surface of the levator ani, covered by the pelvic fascia, now forms the lateral wall of the space. Beginning at the apex of this artificial vagina, sutures are introduced to approximate the levatores and suspend the rectum. Chromicized catgut on full curved, round needles is used. A deep bite is taken in the levator and fascia on the right, the needle is then carried down an inch or an inch and a half, and several transverse stitches are taken across the lateral and anterior aspects of the rectal walls. From this point the needle is carried up to a point on the left levator, corresponding to the first bite on the right, and a similar stitch is taken here. Three or 4 sutures of the same type are inserted at short intervals until the free margins of the levatores are reached. Each of these sutures, when tied, approximates the levatores ani, suspends and plicates the rectum, and closes the depth of the cul-de-sac. A last suture approximates the free margins of the levatores but does not pick up the rectum. This permits the anus to be thrown backward, reproducing the normal backward angulation of the anal canal. The effectiveness of this feature is illustrated in Case 2, in which, although the sphincter was absent, a fair degree of control of solid feces was obtained."

PROLAPSE OF THE RECTUM IN CHILDREN

In children operation is seldom necessary, cure being effected by removal of the underlying cause. Pin worms, polypi, or other accessory factors should receive appropriate treatment and when necessary the gluteal region should be strapped with adhesive plaster, at the same time easy movements secured by laxatives and enemata and care observed to prevent protrusions at stool. A small percentage of cases, either from neglect of treatment or because of extensive prolapse, require operation.

C. L. Heald, in *Surgery, Gynecology and Obstetrics*, June, 1926, describes an operation for ano-rectal prolapse in children, somewhat like the Ekehorn operation, but differing in one

small detail. The prolapse is reduced with the finger, a bivalve speculum introduced with blades spread laterally, and 1% mercurochrome applied to rectal wall. Locating with the index finger the notch at junction of sacrum and coccyx, a 3 inch 3/8 circle curved needle with silk-worm gut is introduced through the rectum and passed out through rectal wall at this point, emerging from the skin posteriorly. The other end of the suture is passed in same way on opposite side of coccyx. Then a second suture is placed similarly 1/2 inch below and both are tied tightly over a gauze compress posteriorly. The child is kept in bed three or four days and bowels not allowed to move. The sutures cut their way gradually through the rectal wall, healing goes on behind the progressing suture, and the resultant inflammatory reaction produces fixation of the rectum. Sutures are removed in two weeks. In the Ekehorn operation only one suture is used and it is introduced from the skin into the rectum posteriorly.

FISTULA

C. F. Martin, in a paper on ano-rectal fistula in *American Journal of Surgery*, December, 1925, among other practical suggestions recommends, in order to prevent the uneven contour of the rectal outlet that often follows extensive incisions of large fistulae, that the tract should be completely excised together with all inflammatory masses which are off-shoots of the main tract. Also, all overhanging tissue should be removed even if a portion of the sphincter are must be sacrificed in order to make a scar that will be as flat as possible. This flattened scar will present an even surface for the remaining portion of the sphincter to contract against, giving a surprisingly satisfactory degree of control. Too much packing retards healing and produces distorted scars. Excision of the fistula and primary suture is not advised except in those of the simplest type. Proctologic treatment of fistulae must be founded upon the most advanced surgical procedures modified to some extent by a septic operative field, and at the same time due consideration given to the importance of preserving the anal sphincters in such condition that they will function properly after the fistula is healed.

FISTULAE AS A FACTOR IN DIABETES

In the June number of *The American Journal of Medical Science*, John W. Visser of Waukegan, Wisconsin, has suggested that abdominal and rectal infections may be an important etiological factor in the development of diabetes. He favors the theory that pancreatitis is the underlying cause in many cases of diabetes, and believes that the pancreas is infected most often through the lymphatics. He cites the experimental work of Graham and Peterman in support of his belief. In two of the five cases men-

tioned, there was a long history of rectal trouble preceding the onset of diabetes, in one instance a fistula of ten years duration with severe exacerbation for nine months preceding operation. The other case had had a hemorrhoid operation 12 years before, and on admission had a fistula with abscess and hemorrhoids. Both were much improved by operation.

It is generally admitted that infectious processes cause an increase in the severity of diabetes and should be dealt with promptly and thoroughly. That they may be a causative factor in the production of the disease has not been stressed.

ULCERATIVE COLITIS

It has been agreed for some years that there exists a colitis with ulceration, varying in intensity and duration but of a chronic type, the cause of which has not been found. Some cases yield to medical treatment, others to one of the various procedures for instituting bowel drainage just above or below the ileocecal valve. But a large proportion of cases recur, whatever the treatment. Attempts have been made to establish various bacteria as the etiological factor, but none of these attempts have proved conclusive. Of several contributions to this subject during the past year and a half, those of Bargen and Logan from the Mayo Clinic stand out as offering the most hope of real progress in the treatment of the disease. In volume 36 of the *Archives of Internal Medicine*, these authors published their experimental work on rabbits and dogs and reported several cases in addition. From a series of 68 cases of definite chronic ulcerative colitis in humans they succeeded in isolating from the depths of the ulcers in 80% of the cases a gram positive lancet-shaped diplococcus. From 20 healthy individuals they were able to recover this organism only once. It resembles the pneumococcus morphologically but has other different characteristics. It is not bile soluble and not agglutinated by pneumococcus sera. The cultures are taken through a proctoscope with a sterile swab from the base of an ulcer after repeated enemas and after careful swabbing of the ulcer to remove surface mucus.

With a pure culture of this organism 139 rabbits were injected intravenously. Forty-five developed colon lesions identical with those in humans, and no lesions elsewhere in body. Similar injection with streptococci (Rosenow) gave no such results. Of 18 rabbits injected with this diplococcus, all were dead in 5 days. Eight showed ulcers of colon. Three had empyema of gall-bladder. The authors, also, recovered this organism in pure cultures from the heart's blood, and again produced the lesions by reinjection in other rabbits. They prepared a vaccine from the human cultures with 2,000,000,000 bacteria per c.c., and instituted treatment using an initial dose of 1 c.c., and injected sub-

cutaneously every 3 days, increasing dose by 1 c.c. each day up to 1 or 1.5 c.c. Local treatment was also carried out, such as irrigation with 1:4000 acriflavine, or saline, or instillations of bismuth and olive oil. Tincture of iodine by mouth was also used, and kaolin in doses of 1 or 1½ ounces as an absorbent. Relief was obtained after 2-3 weeks in nearly all cases.

Removal of all possible septic foci is urged as a preliminary to the treatment. In one patient, age 26, bloody diarrhea had been present for 3 yrs. She had had a tooth devitalized 8 months prior to first attack. The diplococcus was isolated from the rectal ulcers, a vaccine made, and the first injection caused an increase in diarrhea and a soreness in this tooth. A perianal abscess developed, tooth was pulled, and the same organism recovered from the abscess. A rabbit injected with this culture died and showed ulcerative colitis on autopsy. The occurrence of empyema of the gall-bladder in 3 rabbits is suggestive of that organ as a possible focus of infection.

The longest cure in a series of 178 cases so treated is 2 years, but there were others of shorter duration, and 78 of these have been clinically well for periods varying from several months to two years.

If these results can be reproduced in other clinics it would seem as though the disease had at last been conquered. Until this is done we are inclined to be sceptical though sincerely hoping for a favorable check on this very promising research.

CARCINOMA OF THE RECTUM

The great importance of an early diagnosis in this, as in all types of cancer, has been stressed so widely and so often that it scarcely needs mention here. Suffice to say, again, that the possibility of its presence should be always in the mind of the physician whenever there is a history of blood or pus in the stool, increased constipation, diarrhea, pain or discomfort in rectum or pelvis, and loss of weight. Failure to thoroughly examine digitally and with the sigmoidoscope, if any of these symptoms are present, is inexcusable. Favorable prognosis and early diagnosis go hand in hand, provided intelligent treatment is carried out. Various types of operation, radium, and x-ray treatment continue in favor with different men, and there are enthusiasts over each method.

Very little has been written during the past eighteen months on the use of x-ray alone in treatment, though it is used in combination with radium or following operation. T. E. Jones, in *Journal of Radiology*, 1925, V, 306, reports a series of 111 cases of which 60 were treated by radiation alone. The abdomen was opened to look for metastases, and a colostomy performed in every case. Colon washes were then carried out for 10 days, at the end of which

period the growth was again inspected to decide as to its operability. Radium treatment was carried out as follows—the dosage averaged 2600–3000 millicurie hours and the screening varied from 1.5 m.m. brass up to 1.5 m.m. brass plus 1 m.m. lead. In 12 cases needles and tubes were used, in 48 cases tubes alone. In 34 of these cases x-ray also was used.

The follow-up results were as follows:

RESULTS—JONES

Of the 60 cases, 58 were traced:
Males, 40 Females, 18

3 Died intercurrent disease
9 Died of carcinoma
1 Living and well after 4 years
2 " " " " 3 "
5 " " " " 2-3 "
8 " " " " 1 year

Average duration life radiated cases, 13½ months
" " radical operation, 6 months

Survival period	Cases	Alive
3 yr.	20	30%
2-3 yr.	10	60%
1-2 yr.	16	62.5%

Schreiner, in discussion, reported 11 complete cures from 6 months to 4 years, of a total series of 184 cases since 1914. One case was treated only by high voltage x-ray. Jones feels that the colostomy is a most important measure in treatment, and also sometimes divides the sphincters to avoid tenesmus. While we may congratulate these writers upon the results they have obtained in a few cases, it is apparent that the percentage of cures is disappointingly small. Also, the statistics do not carry beyond a 3 year period. Patients with carcinoma of the rectum may live for 3 years untreated.

In the reports of those men who have used surgery are found the most encouraging statistics. James L. Russell in the *Annals of Surgery*, 81, 1925, reports 100 cases, of which 82 were operated on. Some sort of palliative procedure, usually colostomy, was performed in 37 cases. Two lived 2 years, and 2 lived 3 years. In 45 cases radical operation was done.

17 cases lived 1 year
16 " " under 3 months
12 untraced

Of the 17 living over a year, 8 were well after 5 years, 4 after 3½, 1 after 2½, and 1 after 1 year, the remainder living 2 to 6 years.

The operations were as follows—

8 one stage perineal excision
3 one stage abdomino-perineal excision
4 two stage " " "
2 Mikulicz operation

The author advocates biopsy before radical procedure, and cites as argument for this, the fact that in two cases the post-operative pathological report was "not malignant." Also, he mentions that 8 cases had been recently oper-

ated for hemorrhoids. As argument for the radical procedure he refers to Haussman's findings in 112 autopsies in which the tumor in 55 cases had not gone outside the rectal wall. D. F. Jones and McKittrick report 68% of their operative cases showing no perirectal involvement at time of operation. Metastasis occurred in 70% of the author's cases, as follows—

Retroperitoneal	26	Bladder	7
Perirectal	15	Uterus vagina	2
Pulmonary	1	Outside bowel	9
Liver	12		

John Hartwell, Willy Meyer, Peck, Jones, and Gibson in discussion, all favor the combined abdomino-perineal operation, and in one stage if possible.

Joseph A. Blake reported in *Annals of Surgery*, 81, 1925, his cases at Roosevelt Hospital 1906-1912, a total of 16 operations.

10 combined one stage abdomino-perineal—no deaths, 2 are alive 16 and 17 years after operation, 1 died of recurrence after 12½ years, and 1 after 5 years.

6 combined with low anastomosis and preservation sphincter—with 1 alive after 14 years.

However, Dr. Blake advocates the abdomino-perineal operation as the surest procedure. Gaudier's conclusions are the same.

The most optimistic and favorable report we have is a contribution of Lockhart-Mummery in the *British Journal of Surgery* of July, 1926. The report includes 200 cases of perineal removal, and all prior to 1921, giving a 5 year follow-up period. He feels that except in the high growths, where the abdomino-perineal amputation is necessary, the perineal excision, with colostomy, is a safer and an adequate procedure. The former operation has a mortality of 30% and is not safe in people over sixty.

Of this series 100 were private cases—
operative mortality 3%
Of this series 100 were hospital cases—
operative mortality 14%

The difference he attributes to the better general condition of the former class upon admission to hospital, and the better nursing care they receive. Of the cases which come to the hospital for examination, 80% are found to be inoperable.

In the series of 100 private cases are found—

45 five-year cures—54.8%
37 recurrences
6 died of other causes within five years
7 untraced

He places the cases in three groups, pathologically,

- A—Small growth, no glands, no invasion muscular coat.
- B—Deeper involvement, but not too fixed, and no extensive glands.
- C—Large fixed growth and extensive glands.

Class	Total	Five-year cure	Recurrence	Per cent cure
A	30	22	8	73.7%
B	43	19	24	44.1%
C	9	4	5	44.4%

1 case	well after	21 years
2 cases	"	14 "
2 "	"	11 "
3 "	"	10 "
3 "	"	9 "
7 "	"	8 "
8 "	"	7 "
13 "	"	6 "

No known recurrence in patients after seven years

The perineal operation, as done by Lockhart-Mummery, is very nearly as thorough as the combined abdomino-perineal procedure except that he does not amputate quite as high above the growth, and does not get out quite as much of the mesocolon and upper pelvic fascia. His results would seem to justify his procedure. Of interest, especially, are the 4 "Five Year Cures" in Class C. His result in this group is in keeping with Haussman's autopsy findings, and indicates that even the large growths may yet be operable, where no intra-abdominal metastases are found.

NEW YORK ACADEMY OF MEDICINE

THE New York Academy of Medicine announces a stated meeting to be held March 17, 1927, the program to consist in a symposium on measles, presented in cooperation with the Section of Pediatrics.

Section meetings, some of which have already taken place, are as follows: Section of Medicine, March 15; Section of Genito-Urinary Surgery, March 16; Section of Orthopedic Surgery, March 18; Section of Ophthalmology, March 21; Section of Obstetrics and Gynecology, March 22; Section of Laryngology and Phrenology, March 23.

The fifth lecture of the Harvey Society series, under the patronage of the New York Academy of Medicine, will be given on the evening of March 19, at 8.30 o'clock at the New York Academy of Medicine, Fifth Avenue and 103rd Street. Dr. Edgar Leigh Collis, professor of Preventive Medicine and Public Health, University College of South Wales and Monmouthshire, Cardiff, Wales, will lecture on "Phthisis and Industrialism—Silicosis."

SOCIETY FOR THE CONTROL OF CANCER

Science reports that gifts totaling more than \$50,000 were received during the first three weeks in February by the American Society for the Control of Cancer. This reduces to \$260,266 the amount needed to make R. Fulton Cutting's conditional gift of \$250,000 available.

Case Records
of the
Massachusetts General Hospital

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.

F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 13111

A CASE OF RHEUMATIC HEART
DISEASE

MEDICAL DEPARTMENT

First admission. A chauffeur twenty-eight years old entered for the first time for pain in the hip and leg.

Past history. Fistula in ano at eighteen. Rheumatism in every joint at nineteen; in bed six months; heart involved,—“double murmur.” Undue exertion now caused dyspnea. At twenty had a gland in the neck opened. Night sweats once a week for six months.

Examination of the heart at this time showed enlargement, (percussion measurements as shown in Figure 3 a.) sounds and action normal, a rough systolic murmur at the apex, very loud first sound followed by reduplicated second sound heard loudest at the apex, transmitted to axilla and base, and sounding like a rough diastolic when heard close to the left of the sternum. Pulses normal. Artery walls palpable. Blood pressure 120/50. Wassermann negative.

The pain cleared up in ten days under aspirin. A diagnosis of sciatica was made. He made ten more visits to the hospital during the next seven years and a half with no return of this trouble.

History of interval. During the next year he had influenza. Night sweats continued, and he urinated once or twice at night. He was however well, and continued to work. In November, three years and a half after discharge, he began to have increasing dyspnea, palpitation, weakness, cough on exertion with blood-flecked sputum, and slight frontal headaches several times daily. After two months he had to stop work, and after this worked intermittently. He lost appetite. For two weeks before readmission he had orthopnea and practically constant precordial pain.

Second admission. March 8, four years after the first admission.

Clinical examination was negative except for the heart. Apex impulse not seen or felt. Percussion measurements as shown in Figure 3 b. Sounds and action normal. Presystolic roll ending in a loud snapping first sound at the apex. A blowing systolic murmur, loudest at the apex,

and a fairly loud middiastolic murmur, more blowing in character than rumbling, localized at the apex. Pulses and arteries normal. Blood pressure 90/40.

Urine normal except for a few red cells and leucocytes at all of three sediment examinations. Hemoglobin 50 per cent., reds and leucocytes normal. Wassermann negative.

X-ray showed fine mottling throughout the greater part of both chests, most dense around the roots of the lungs and extending out along the curve of the bronchi. There was also a dense narrow band running across the right chest in the region of the interlobar septum. The heart shadow was distinctly enlarged and roughly triangular in shape. The greatest increase was in the region of the left auricle. The supracardiac dullness was not increased and there were no definite mediastinal masses. (Figure 1.) There was retraction of the alveolar

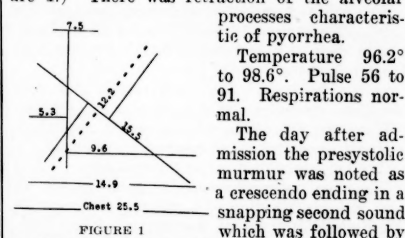


FIGURE 1

a diastolic murmur that continued the first sound. There were a few scattered râles at the base and the patient had considerable cough. Under rest this cleared up in two days and the patient was quite comfortable, though there was no change in the heart murmur. He still complained of fleeting pain in different joints. March 16 he was discharged with advice to take absolute rest.

History of five months' interval. Toward the end of May the patient had a return of dyspnea, palpitation, pain over the heart and cough with much rusty sputum. After this attack he had constant pain across the chest with cough and a feeling of “filling up” upon exertion. In the middle of August the pain became more severe. He had also severe sharp pain in the left costal region in the axillary line. He felt weak. He had severe headaches, worse with exertion. He had pain in the calves of his legs. He had a feeling of pressure which became worse the longer he lay down. Walking seemed to relieve the pain.

Third admission. August 24.

Clinical examination showed slight cyanosis. The heart was not enlarged. There was a long murmur throughout diastole ending in a presystolic crescendo with a slight thrill. Pulmonic second sound accentuated. Blood pressure 120/60. Electrocardiogram: normal rhythm,

rate 60, right axis deviation, notched P₂, high T₂. Many medium moist râles over both bases posteriorly.

Blood 14,000 to 12,500 leucocytes, 75 per cent. polymorphs, hemoglobin 75 per cent.

In four days the thrill at the apex had become more definite and a systolic murmur was heard. Two days later the chest was clear and the liver was no longer palpable. September 6 he was discharged.

History of three months' interval. After leaving the hospital he did well until early in December. Then he overexerted, and had a return of dyspnea, severe cough, increasing orthopnea and pain in the lower abdomen extending upward into the chest as a "choking" sensation. December 14 he had to give up work. All food distressed him.

Fourth admission, December 20.

Clinical examination essentially as before except as noted. Mitral facies. Heart only slightly enlarged. First sound loud and snapping. Pulmonic second was greater than aortic second, very loud. A systolic murmur over the apex with a diastolic rumble and presystolic accentuation. A presystolic thrill at the apex.

Blood: 8,800 to 14,800 leucocytes, 68 per cent. polymorphs, hemoglobin 70 per cent. Considerable achromia. One Wassermann weakly positive, one negative.

X-ray. Heart shadow practically the same shape but slightly larger than at the previous examination. (Figure 2.)

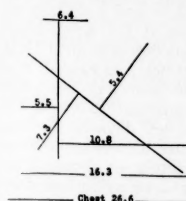


FIGURE 2

Temperature 96° to 98.2°.

December 30 the patient was discharged partially relieved.

History of six days' interval. The day after his discharge, after walking two blocks, the patient had dyspnea and the old pain across the upper chest, but more intense and more on the right than on the left, remaining constant except for occasional short remissions.

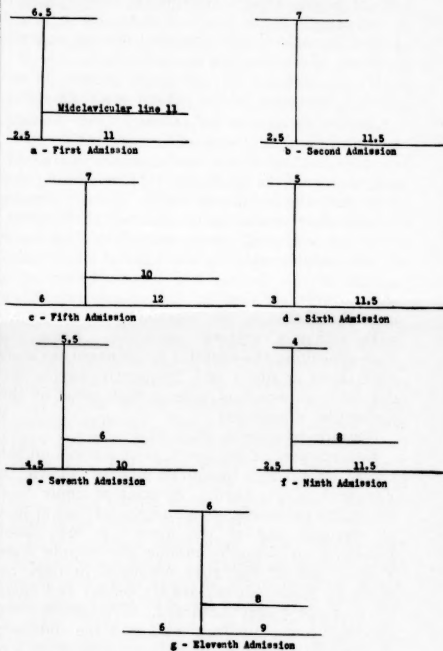
Fifth admission, January 5.

Heart: Percussion measurements as in Figure 3 c; sounds about as before, but pulmonic second definitely increased. Electrocardiogram: normal rhythm, rate 60, diphasic T₂, right axis deviation as before. Very slight edema of both feet.

Slight achromia. Wassermann negative.

The patient was perfectly comfortable until January 12, when after walking upstairs he had an attack of precordial pain and dyspnea lasting four hours. January 17 while lying in bed he had another attack of pain not relieved by nitroglycerin. January 25 he was discharged.

History of a year's interval. In May, three months after his discharge, he went to a hospital



HEART MEASUREMENTS BY PERCUSSION.

FIGURE 3

where he spent six weeks with an attack of rheumatism.

December 1 he was seized with intense pain in the right flank, followed by dull aching and tenderness in the right lower quadrant and by frequency about once in two hours. The urine was red but not bloody.

Sixth admission, December 3.

Heart: Percussion measurements as in Figure 3 d; a soft systolic murmur at the apex, a rough diastolic at the apex with presystolic accentuation and thrill. Tenderness and spasm throughout the right half of the abdomen and tenderness in both flanks. Rectal examination showed slight tenderness on the right.

Urine dark at one of three examinations, 10

to 40 leucocytes at all three, very rare red cells once. Renal function 50 per cent. Blood counts normal, a little achromia, large cells, considerable anisocytosis. Blood culture: no growth. Wassermann negative.

X-ray showed the kidney outlines indistinct on both sides. Low down on the left overlying the sacro-iliac articulation was a ring-like area of increased density probably representing calcium deposit in the joint. Comparison with old plates in rather different positions showed the location of the shadow to be the same.

By December 9 the pain had cleared up entirely. December 10 the patient was discharged.

History of six months' interval. For the next two months he did very well on digitalis. After an attack of weakness and dyspnea his physician stopped the medicine. After this he did well until the middle of April. Then he began to take short walks, and had a return of symptoms. A feeling of contraction around the waist is now mentioned. By the time of his seventh admission this feeling had become severe as a sharp pain felt first in the epigastrium, then over the abdomen, but especially on the right, with rather a ureteral radiation. From the time of leaving the hospital he urinated three or four times at night and frequently during the day in small amounts, always with relief of the abdominal discomfort.

Seventh admission, May 24.

Enlargement of the heart, most marked on the right. Percussion measurements as shown in Figure 3 e. No thrill. Systolic murmur over the entire precordia, particularly marked at end of sternum and at the apex. A low, faint rumbling in diastole outside the nipple line. First sound at the apex obscured in part by murmur. Abdomen moderately tender and spastic in right upper quadrant. Tenderness over the right lower quadrant and over the abdomen in general, making palpation unsatisfactory. Liver appeared to be down nearly to the umbilicus and was very tender. Some right costo-vertebral tenderness. Pupils reacted very poorly to light.

May 27 there was acute pleuritis over the precordia. June 2 the patient was discharged.

History of five months' interval. He felt very well on digitalis for three months. Then he noticed return of edema of the legs. His digitalis was increased for a time and he was given diuretin, which he thought was not beneficial. By October he had dyspnea, dizziness, specks before his eyes, weakness and sleeplessness. The edema became painful. November 8 he went to bed. Attempts to decrease the digitalis caused nausea and vomiting.

Eighth admission, November 13.

Cheeks flushed. Moderate dyspnea. Obviously weak. Many rales. Heart moderately enlarged in the transverse diameter. A systolic murmur all over the precordia except over the

pulmonic area, loudest at the apex, with a sawing character on inspiration from apex to sternum. At the apex a very faint early delayed diastolic. Radials palpable. Blood pressure 130/80. Discoloration in legs and feet with old superficial ulcer remains, especially on the right leg. Two small areas resembling petechiae in the right lower quadrant and others on the lower eyelids and the right buccal surface. Moderate edema of both legs and feet with some tenderness. Pupils normal. Fundi arteriosclerotic.

The urine was essentially as before, with rare red blood cells at two of five examinations. Blood: hemoglobin 80 per cent., 4,480,000 reds, slight variation in size and shape. Wassermann negative. Blood culture: Gram-positive spore bearing bacilli. One of two stool examinations gave a positive guaiac.

The day after admission the patient had a sudden attack of severe knife-like pain in the right lower quadrant radiating to the midepigastrium. The following day a mass with rounded edges in the left flank is mentioned, whether liver or kidney was not determined. November 18 the patient was discharged.

History of three months' interval. With rest and digitalis he was fairly comfortable. Early in January he again had a sudden attack of pain in the right lower quadrant. The whole right side of the abdomen and the epigastrium were acutely tender. He was sent to a hospital where he was told that he did not have appendicitis and was put to bed on digitalis. On the fourth day in the hospital he had a sinking attack, pulse not perceptible at the wrist, heart rate 30 to 35. He was semiconscious until 11 at night, then became extremely nauseated and vomited with relief. The next day the pulse rate was normal. He continued to vomit for three days. He remained ten days in the hospital. After returning home he was much more dyspneic than before. He took no digitalis for two weeks. On resuming it he again had nausea and vomiting.

Ninth admission, February 12.

Clinical examination. A pale, worn, icteric and cyanotic man in respiratory distress, yet not in such bad condition as at the last admission. Apex impulse of the heart in the sixth space 11.5 centimeters from midsternum, mid-clavicle 8 centimeters. Percussion measurements as shown in Figure 3 f. A marked loud systolic murmur at the apex, a blowing diastolic just inside the nipple. Blood pressure 120/80. E electrocardiogram: normal rhythm, rate 85, diphasic T₂, prominent P₂, .12 seconds wide, right axis deviation, index —18. Slight dullness at both lung bases. A few sticky rales at the right apex. Very large tender liver, pulsating! Probably fluid in the abdominal cavity. Edema of the lower legs.

Dr. White noted: "The unusual features pres-

ent are (1) presence of normal rhythm and (2) the change in the murmurs at the apex. Two years ago there was little or no systolic murmur at the apex, but a very well marked diastolic roll with presystolic accentuation. Now there is a very loud systolic murmur at the apex and only a faint diastolic rumble without presystolic accentuation. . . . Sensation complained of this morning as of sand rubbing in the chest. . . . No friction rub is audible."

The patient made much improvement in the first nine days with no medication whatever. He was digitalized before his discharge March 2.

History of six months' interval. After this discharge he enjoyed life, occasionally driving a car and even changing a tire. He took digitalis until the middle of August, when he stopped because of vomiting. Occasional vomiting continued, and he was icteric. He urinated frequently because he felt it relieved his dry cough. Sometimes vomiting accompanied urination. For the first time he was extremely irritable.

Tenth admission, September 9.

Clinical examination. Mild icterus. A loud musical systolic murmur at the apex and tricuspid areas obliterating the first sound. Gallop rhythm and very faint second sound. Late diastolic murmur. Rate rapid but regular. Blood pressure 120/80. Liver much enlarged. Abdomen distended. Edema of the lower legs and many discrete areas of discoloration, possibly petechiae.

Urine: many leucocytes, once loaded with clumped leucocytes, 10 to 12 red cells at one of three examinations. Renal function 25 per cent. Blood: 15,200 to 9,900 leucocytes, reds 3,960,000 to 4,775,000, hemoglobin 65 to 70 per cent., smear normal.

Temperature 96.8° to 98.4°, pulse 70 to 100, respirations 20 to 30.

X-ray. No shadows in the kidney region which could be interpreted as stone. Heart shadow increased considerably in size since the last note. Now marked dilatation of both auricles in addition to the changes in the heart shadow. (Figure 4.)

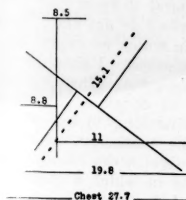


FIGURE 4

up the gas." He had very little trouble afterwards. He had marked constipation. After the first week he had frequent nausea

and vomiting. After stopping digitalis the vomiting was less, but nausea continued three weeks after leaving the hospital. Three weeks after discharge he had sharp pain in the loin radiating to the left testicle, somewhat relieved by hot packs and by urination. Next day there was lameness and soreness in the left lumbar region, and for two days dull pain with sharp exacerbations. He was in a hospital at this time for a week. While there he was given digifolin without gastro-intestinal upset. By the end of October the edema was gradually disappearing from his ankles, first the right, then the left. Early in November he had pain, which became knife-like, in the left calf and so intense that he could not put his foot to the floor. Poultrices gave some relief. A week later he had soreness in the left wrist, which became increasingly painful. November 17 this began to improve. At the time of his eleventh admission he had had orthopnea, cough, dyspnea and edema for two weeks. He had taken no digitalis for three weeks.

Eleventh admission, November 18.

Clinical examination showed dyspnea, orthopnea, cyanosis, slight icterus. Injected throat. Apex impulse of the heart felt in the fifth space. Percussion measurements as shown in Figure 3 g. First sound replaced by a loud musical systolic murmur. Late diastolic. Blood pressure 110/75. Liver much enlarged. Little or no ascites. Left wrist swollen and tender. Left calf very tender. Scars on lower third of right leg. Some edema of the right ankle. No dorsalis pedis felt in either foot.

Urine reddish once, dark twice, cloudy once (three examinations), alkaline once, very slight trace to a large trace of albumin three times, bile three times, rare red cells once, 5 to 40 leucocytes twice. Blood: 12,100 to 28,200 leucocytes, polynuclears 67 per cent., hemoglobin 75 per cent., reds 4,640,000, slight achromia, anisocytosis and poikilocytosis. Icterus index 13.

Temperature 97.9° to 101.3°, pulse 79 to 100, respiration 22 to 32.

The night of November 20 the patient vomited huge amounts of fluid containing food and some blood clots. He was put on Karrell diet and had no more vomiting. The night of November 22, an hour after being given a grain and a half of digifolin intramuscularly, he became pulseless and very dyspneic. The apex rate was 96, the blood pressure 100/80. He was given atropin and pantopon. (He vomited after morphia.) His pulse came back and he soon felt as well as ever. The following night however and November 24 he failed, becoming markedly cyanotic and jaundiced. His extremities became livid and icy cold. In the afternoon venesection was done and 500 cubic centimeters of blood was withdrawn without obvious benefit. That evening he died.

DISCUSSION

BY RICHARD C. CABOT, M.D.

NOTES ON THE HISTORY

This is an enormously long history of a patient who was here eleven times. I will summarize it.

It is obviously a heart case from the beginning. The intervals between his admissions here were: the first four years, then five months, then three months, then six days, then one year, then six months, five months, three months, six months, ten weeks; the whole covering somewhere between seven and eight years, all occurring in a man twenty-eight years old at the first admission, thirty-five or six when he died, who had had well marked rheumatism at nineteen.

All the physical examinations from the first had shown perfectly clear mitral stenosis, and the symptoms are those of uncompensated heart disease. He is given digitalis and gets on fairly well.

NOTES ON THE PHYSICAL EXAMINATION
(NINTH ADMISSION)

We notice he is "icteric."

I see nothing in the electrocardiogram to throw light upon the condition of the myocardium in any important way.

That he was able to change a tire shows that he had pretty good muscular power.

"He urinated frequently because he felt it relieved his dry cough. Sometimes vomiting accompanied urination." That is a very curious statement. I can't explain it.

At the tenth admission for the first time there is a musical murmur at the apex. The urine does not show much of anything.

Early X-rays had shown prominence in the region of the left auricle. This shows it in both auricles.

"He lost eight pounds," which probably meant a loss of dropsical fluid, and was wholly favorable.

With this soreness and pain in the left lumbar region we think of a kidney infarct.

I take it that the condition in the calf was not due to the plugging of an artery but was an acute infection connected with whatever organism is causing his trouble.

Inability to feel the dorsalis pedis is not very significant, because there is such a large proportion of normal persons in whom we cannot feel it.

The icterus index is a little more than double what it ought to be.

The chart shows that the temperature was not as high as it sounded. He had one period of fairly elevated temperature lasting only a couple of days. The pulse has been to eighty or ninety.

Not a word has been said about arrhythmia.

It is very striking that in this long mitral case we have not heard anything about arrhythmia. One of the features that I noted in my book about the heart is that cases which are going to show arrhythmia usually show it in the beginning. If they do not have it then they do not show it until near the end or not at all. It comes early or never in many cases.

DIFFERENTIAL DIAGNOSIS

The many examinations of the heart all point to mitral disease, and to nothing else. But when a man has had mitral disease as long as this we should wonder if there is not some stenosis at the tricuspid or aortic as well. We cannot, however, go further than speculation about that. We have no means of being sure of tricuspid disease.

The interest is centered at two points. Did he have subacute bacterial endocarditis in addition to his chronic endocarditis, and what infarcts did he have?

I suppose that he did have some acute or subacute endocarditis. In the first place he so many times had jaundice, often seen in that condition and not well explained by anything else that is here spoken of. Then he had a good many changes in his murmur,—at one time a musical murmur, at one time a high leucocyte count, at various times with fever.

He did not have any skin emboli that we are sure of. There were some doubtful purpuric spots. He did, however, have a number of attacks of pain which might perfectly well be due to emboli in the kidney or spleen or elsewhere.

So that I should suppose the best diagnosis we could make would be chronic endocarditis of the mitral valve with stenosis, probably an acute or subacute process on top of that, or possibly of one of the other valves; and then the results of embolism or infarction in a number of organs, the kidney and spleen being the commonest. The kidney is the one on which we have most evidence. There are one or two minor features that I will say something about. He had some pain in his chest, in the sense of stricture about his chest and lower down. Whether it was anything more than the general distress that cardiac patients generally have I do not know. He is not of an age or type in which we expect coronary disease or arteriosclerosis. I should suppose it was part of his dyspnea. Then he had this peculiar connection of cough or vomiting with urination. I have nothing to say about that. There may be some connection with the infarcts which I assume were in the kidneys.

This is the sort of case in which a glomerulonephritis is often found, but the urinary examination does not give any support to such a guess. I do not see any reason to suspect disease in any of the other organs. I should suppose, then, it was wholly a cardiac case with

cardiac infection and infarctions, and of course chronic passive congestion.

A PHYSICIAN: Is there any explanation of the blood clot in the vomitus?

DR. CABOT: No, I do not see how to explain it.

Miss Painter noticed the variations in percussion diagrams at the different entries. (See Figure 3.) I have said many times that percussion of the heart seems to me a great waste of time. If it is really important to know about the size or shape of the heart we have to have an X-ray. If it is not important we can get along with palpation. But the variation in those figures and in the supracardiac dullness, which cannot be supposed to vary much in fact, is very striking.

We have some X-ray films. If you have a minute to go over them, Dr. Camp, I should be much obliged.

DR. JOHN D. CAMP: I presume this one, made on the 3d of March, is the first. It shows enlargement to the left and right and prominence in the region of both auricles. It is the shadow which we associate with mitral disease. It is interesting to see how these measurements compare with the percussion measurements. There is very little difference. Our measurements on the right is 5.3, the percussion 2.5.

This is the film made in December of the same year. The shape is just about the same. We have not the film with the measurements on it. In addition to the enlargement of the heart we see the thickened hilus shadows which radiate out on each side and leave the rest of the chest relatively clear, a point which of course differentiates chronic passive congestion from tuberculosis. Compared with the first measurements they are just about the same. The supracardiac measurement is a little bit less, but I should say that it is within the margin of error for this method. The measurement of the left ventricle is a little greater. He apparently had a little hypertrophy.

The last plate, made three years later, shows considerable cardiac enlargement over the preceding examinations, and rather marked dilatation of the right auricle, which is a great deal larger than it was before. The patient evidently was quite dyspneic. There is no evidence of fluid.

X-RAY INTERPRETATION, SECOND ADMISSION

The shape of the heart shadow suggests mitral disease with stenosis predominating. The condition of the lungs may be the result of the heart lesion.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Rheumatic heart disease,—mitral stenosis and regurgitation.
Congestive failure.

DR. RICHARD C. CABOT'S DIAGNOSIS

Chronic endocarditis, mitral stenosis.
Acute or subacute endocarditis?
Hypertrophy and dilatation of the heart.
Embolism or infarction.
Chronic passive congestion.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion.*
Chronic endocarditis of the mitral valve.
(Stenosis.)
2. *Secondary or terminal lesion.*
Hypertrophy and dilatation of the heart.
Chronic passive congestion, general.
Hemorrhagic infarction of the lower lobe, of the right lung.
Small piece of persisting thymus.
Hydropericardium.
Slight ascites.
Edema of the right lower extremity.
Hypertrophy of the spleen.
Slight icterus.
3. *Historical landmarks.*
Chronic pleuritis.

DR. RICHARDSON: He was a fairly well nourished man. We were not permitted to examine the head. The skin in the region of the neck and upper part of the chest anteriorly was slightly yellow. The right lower extremity was slightly larger than the left, the leg somewhat swollen and pitted slightly, and there were large purplish areas over the knees and in the region of the ankles and upper part of the feet. There was no edema of the left lower extremity. The abdomen bulged slightly in the region of the flanks. The wall was soft.

The peritoneal cavity contained 200 cubic centimeters of thin pale, fairly clear fluid. Gastrointestinal tract negative. The stomach, small intestine, and large intestine showed well marked chronic passive congestion. The mesenteric and retroperitoneal glands were negative. The anterior margin of the liver was five centimeters below the costal border. The diaphragm on the right was at the sixth rib, on the left at the sixth interspace,—a little down on each side.

In each pleural cavity there was a small amount of thin pale fluid. There were a few scattered old pleural adhesions on each side. The thyroid was negative. There was a small piece of thymus gland still present. The trachea and bronchi contained much brownish-red frothy fluid. The bronchial glands were moderately enlarged, up to three centimeters across, the tissues plump, dark brown-red, soft. No evidence of tuberculosis. The tissue of the lungs showed chronic passive congestion, and in the case of the right lung, in the region of the lower lobe posterolaterally, extending from the pleura inward,

a black-red tarry infarct about four centimeters across.

Was the blood spitting due to that?

DR. CABOT: It was vomited blood apparently.

DR. RICHARDSON: It is fair to say that stomachs with marked chronic passive congestion might contain much thin bloody fluid exuded from the congested mucosa.

DR. CABOT: Yes, I thought it was probably from the congestion of the stomach rather than from this infarct.

DR. RICHARDSON: The pericardium contained 400 cubic centimeters of thin pale clear fluid. In this case the pericardium seems to have a greater excess of fluid than any of the other cavities. The heart weighed 562 grams. At thirty-five years of age that is a well marked hypertrophy. The myocardium on the right measured seven millimeters, on the left twelve. If we had to stop right there we should say there was a mitral stenosis on the chances. The left ventricle was negative. The left auricle showed no definite dilatation. The left auricular wall was thickened. On the right side the cavities showed much dilatation. The foramen ovale was closed. The auricular appendages were frankly negative. The mitral circumference was about three and a half centimeters,—definite stenosis. The curtain showed much fibrous and fibrocalcereous thickening with marked deformity and great reduction in the circumference,—a typical mitral stenosis. The free margin of the thickened curtain measured up to one centimeter in thickness. No definite acute endocarditis was made out. The aortic valve measured six centimeters, no stenosis. One of the cusps showed slight fenestration. There was no definite evidence of endocarditis. The tricuspid valve measured twelve centimeters, the curtain slightly thickened, but smooth, and showed no definite evidence of endocarditis. The pulmonary valve, eight centimeters, and negative. In other words a pure mitral stenosis, and in this particular case the auricular appendices were free, negative. The pulmonary artery, veins, venae cavae and portal vein were negative.

The liver weighed 1530 grams. The tissue of the liver, as often happens in these cases of chronic passive congestion, was a little granular and somewhat tough. The question arising here is, Was it cirrhosis? Microscopical examination showed chronic passive congestion. In cases of old chronic passive congestion, some believe that there is an increase in the interstitial tissue. Some do not. I think that in some of the cases the interstitial tissue seems to be increased and to be associated with chronic passive congestion, and it is not cirrhosis of the liver; and it was not in this case.

The spleen weighed 465 grams. The tissue was dark brown-red and elastic, and with the hypertrophy typical of chronic passive congestion.

The adrenals were negative. The kidneys' combined weight was 350 grams. They showed frank chronic passive congestion. The pelvis, ureters, bladder, prostate, seminal vesicles, and testes were frankly negative.

DR. CABOT: And that slight icterus is not explained so far as I see.

DR. RICHARDSON: No, except that in these heart cases every once in a while some icterus is found.

DR. CABOT: Do you think it was possibly connected with the passive congestion of the liver?

DR. RICHARDSON: It might be.

DR. CABOT: There is a good deal of unexplained pain in this case.

In Dr. Richardson's account he said nothing particular was noted about the left ventricle. Yet we certainly should think from the X-ray plate that there was a big left ventricle. That agrees with his findings about the auricle but not the ventricle. I wonder if that could be due to the excessive pericardial fluid that he found.

DR. CAMP: I hardly think so. Even in these other plates he certainly had some hypertrophy of the left ventricle.

DR. RICHARDSON: That is what we do not find in pure mitral stenosis.

DR. CAMP: So far as the X-ray is concerned it is a typical mitral lesion, and the picture we see when there is extensive regurgitation.

A PHYSICIAN: How do you explain the enlargement of the right auricle?

DR. CABOT: When we get a blocked mitral the direction of blocking up is in the direction of the lungs of course. Then the whole right side of the heart. The first place is the left auricle, then the lungs, right ventricle, right auricle.

A PHYSICIAN: Isn't this much more prominent than usual?

DR. CABOT: Yes, I should think so.

CASE 13112

A CASE OF GENERAL PARESIS WITH A LONG REMISSION

NEUROLOGICAL DEPARTMENT

The patient came to the Massachusetts General Hospital at the age of forty-four, and a diagnosis of general paresis was made. According to his history he acquired syphilis when eighteen or nineteen years of age, that is, twenty-five years previously. At the time of his infection he received treatment from one of the best known syphilologists and was apparently cured.

Three years prior to admission, desiring to get married, he was examined. No signs of syphilis were found by the examining physician. The Wassermann reaction on the blood serum was negative. He thereupon married. There were no children, but the wife was not infected with syphilis.

Two years before admission symptoms made

their appearance in the form of chills and sweats. From this time on his general health was considered poor. He began to become slowly less and less efficient. At the end of 1918 a diagnosis of syphilis of the central nervous system was made. He received some arsphenamin.

As he continued to grow worse he was sent to the hospital, where he received arsphenamin intravenously and a few intraspinal injections. On admission to the hospital his blood Wassermann was negative, but the cerebrospinal fluid findings were strongly positive. He continued to dement. In November his condition was so bad that he was unable to do any work. His memory was so poor that he was unable to take care of himself. He could not do simple arithmetic in the form of addition or subtraction although a civil engineer by profession. At times he was not correctly oriented. His memory for recent events was almost nil. The pupils were unequal, the right being larger than the left. There was Argyll-Robertson reaction. There was speech defect, tremor of the lips, slow gait with some ataxia, and a marked Romberg reaction. There was hypotonus of the muscles and a general dulling of sensation. The bladder was distended. The right knee and ankle jerks were absent.

On December 17 a trephine opening was made in the frontal region of the skull by Dr. W. J. Mixter, and the patient was given an injection of arsphenaminized serum. The ventricular fluid was essentially negative, although the spinal fluid was strongly positive.

The operative wound healed promptly. The patient, however, became very much excited, noisy, crying out, entirely disoriented and confused, so much so that it was necessary to transfer him to the Psychopathic Hospital. There treatment was continued.

At the Psychopathic the patient received four more intraventricular injections through the same trephine opening, as well as semi-weekly injections of arsphenamin. In a short time his mental improvement was quite remarkable, so that in July, six months after the operation, he was able to return to his previous position, which position he has continued to fill satisfactory to the present time.

At the end of two and a half months of treatment the blood Wassermann became negative. It has remained negative since that time. The spinal fluid improved slowly with continuation of treatment in the form of intravenous injections of arsphenamin at weekly intervals. By October the Wassermann reaction was negative in the spinal fluid. There was still a considerable amount of globulin, and increase in the total protein, 5 cells per cubic millimeter, and a strong paretic gold curve.

Arsphenamin injections were continued at less and less frequent intervals, but not less often than monthly, until four years after the operation. Within the four year period from his first

intraventricular injection he received in addition to the intraventricular injections sixty-five intravenous injections of arsphenamin, the average dose being 0.3 grams. In January, four years after operation, the Wassermann reaction on the blood was negative. The spinal fluid gave a positive reaction with one cubic centimeter of fluid, but negative with 0.8 cubic centimeters. There were two cells per cubic millimeter. Globulin was present, and the total protein was increased.

The treatment was then changed to tryparsamide, the patient receiving 3 grams of tryparsamide every two weeks. In January, five years after the operation, blood Wassermann was negative. The spinal fluid Wassermann was negative. There was no globulin, one cell per cubic millimeter, and the goldsol reaction was negative. From this time on treatment was given about once a month. In December, seven years after the operation, the blood Wassermann was again negative, as was the Wassermann reaction on the spinal fluid. There was the slightest possible trace of globulin, total protein 34 milligrams per 100 cubic centimeters. Goldsol reaction read 5521000000. The patient has continued in the best of mental and physical condition.

DISCUSSION

BY HARRY C. SOLOMON, M.D.

The blood Wassermann after becoming negative always remained so.

The diagnosis of general paresis or taboparesis was apparently correctly made on all the factors that such a diagnosis is usually made ante mortem.

The goldsol reaction was of the typical paretic type.

There are a number of interesting points about this case. In the first place there is the lesson that we have often learned that the absence of outstanding visceral symptoms and a negative Wassermann do not mean the cure of syphilis. This man had all this and went on to develop paresis.

The apparent inefficiency of injections of arsphenamin and intraspinal injections after paresis is established is clear enough and usual. It is interesting to note the rather quick and prompt improvement after intraventricular injections of arsphenaminized serum. In two or three months after the beginning of such treatment improvement was manifest.

Another interesting thing was the fact that the ventricular fluid, which connects directly with the spinal fluid obtained from lumbar puncture was negative. This is not unusual in cases of paresis.

Another point of interest was that in one or two intraventricular injections the ventricular fluid became strongly positive, and with another injection and a little time interval again became

negative, although the spinal fluid remained positive.

It will be noted that a matter of more than four years' treatment with arsphenamin, with clinical improvement, had taken place but did not succeed in producing a completely negative spinal fluid. On the contrary the Wassermann and cells were all that became reduced.

It is interesting to note again that tryparsamide seemed to have a more marked influence on the spinal findings, as a matter of a year's treatment with tryparsamide produced a completely negative cerebrospinal fluid. However, a very important point is that continuing the treatment the spinal fluid relapses to some extent, as we still find a slight trace of globulin and a gold reaction that is not negative.

The final fact is that where there appears to be dementia it is often only apparent, as the mental processes come back entirely. So this man who seemed to have lost his mentality for a period of months succeeded in regaining a very competent ability.

The other thing that is important, I think, is the fact that such a satisfactory improvement is possible in cases that have all the clinical and serological and neurological findings of general paresis.

Just one other point possibly, and that is that while this ventricular method has some evident value as shown by this case, it has rather been superseded by other methods at the present time.

DR. LORD: Could you say how many intraventricular injections he has had?

DR. SOLOMON: He had five.

DR. LORD: Does this positive goldsol mean active syphilis?

DR. SOLOMON: I don't know what it means except that it is fair evidence that there is some pathological process going on, and usually a parenchymal process, as we see it in brain tumors and multiple sclerosis and rarely in purely meningeal disorders. One would presume that there were some foci of spirochetes active in the cortex, although probably a very small number.

DR. LORD: Would you care to express an opinion regarding the treatment with malaria?

DR. SOLOMON: Treatment with malaria I think, taking cases not too far advanced, will give a remission to rather good competency in approximately thirty per cent., or about one-third of the patients. These remissions will last for a considerable period of time,—how long, of course, the experience with malaria is too short yet to tell, but several years is to be expected. Probably with the continuation of adequate treatment of one sort or another these remissions can be held for a very long period.

DR. LORD: Is there any way of comparing the efficiency of this new method with the efficiency of older methods?

DR. SOLOMON: It is very difficult to do that because there has been so very little actually

good work done with the older methods. This is, of course, a personal opinion only. The fault of most of the treatment has been its inadequacy, the attempt to get a result with very little treatment. The treatment given to the patient reported is a very small amount of treatment in our experience to produce a good result. Ordinarily when we have obtained good results with ventricular injections it has taken in the neighborhood of a dozen or so to produce what was done here with five. When it comes to the use of arsphenamin intravenously, large doses two to three times a week over a period of a year or two have been required. That has been done in so very few clinics that there are no figures of any value. Tryparsamide however offers a great deal more than arsphenamin, and I think that is practically comparable with the results obtained with malaria, although not so striking because it takes a longer period to get them. Malarial patients often improve in the course of two or three weeks.

DIAGNOSIS

General paresis or taboparesis.

CASE 13113

AN UNCOMMON CAUSE FOR SCIATICA AND ABDOMINAL TUMOR

SURGICAL DEPARTMENT

A Russian woolen mill dyer fifty-four years old entered the hospital April 6. He spoke no English and was very deaf and very unintelligent. The history was given by his physician.

A month before admission the patient went to the doctor saying that he had been incapacitated for two weeks with severe pain in his right leg, indicating the course of the sciatic nerve. The pain came on suddenly. His work was very light; there was no known physical strain connected with the pain. He had been in bed since the onset unable voluntarily to move the leg. Flexing the thigh on the abdomen caused intense pain. Three weeks before admission a second similar severe pain began, running from the hip joint down the inguinal fold to the inner aspect of the thigh down to the knee joint. At admission it was this pain that gave him the greatest distress, although the original external pain still persisted. Both pains were nearly constant. Absolute rest in bed with his leg slightly flexed gave some relief. He was often unable to sleep and was sometimes awakened by the pains. On the whole they had become more severe. There had been no upward radiation and no pain below the knee. He thought he had lost weight, though only since he had lost his appetite during the illness.

He had always been strong and well until this illness. He denied venereal infection and

exposure to tuberculosis. No family history was obtained except that his wife and children were living in Russia. No history of other symptoms could be obtained. (Language difficulty.)

Examination showed a well nourished man with slight pallor of the skin and mucous membranes, lying with his right thigh acutely flexed on his abdomen, at times in acute distress. The teeth were badly discolored. There was pyorrhea. The chest was barrel shaped and moved as a whole. The lungs were hyperresonant throughout; the breath sounds were somewhat distant, with prolonged expiration. There were many sibilant and sonorous râles throughout both chests with a few coarse moist râles at each base, especially the left. The heart was normal. The skin of the abdomen just below the xiphoid showed a small nodule. Occupying the right lower quadrant was a large firm globular mass adherent to the retroperitoneal structures, not especially tender, about 20 centimeters in diameter. There was no free fluid. The right leg and thigh were held flexed and could be moved, but extension and lateral rotation were painful. There was no peripheral paralysis or disturbance of sensation. There was bilateral inguinal gland involvement. The spine showed some dorsal kyphosis but no localized tenderness or muscle spasm over either the sacral or the sacro-iliac region.

The urine was normal in amount, before operation neutral at one of two examinations, specific gravity 1.024, the slightest possible trace of albumin at one of two examinations, 1-3 leucocytes per field at one. Blood before operation: leucocytes 23,500-10,500, polynuclears 83 per cent., hemoglobin 60-65 per cent., reds 3,840,000-3,920,000, slight achromia, platelets possibly increased. Wassermann not recorded.

X-ray plates of the lumbar spine and sacro-iliac region failed to show any definite variation from the normal.

Before operation the temperature was 98.1°-102.4°, with afternoon elevation, the pulse 71-83, the respiration normal.

A surgical consultant advised operation. April 9 it was done. The patient made a good recovery and was comfortable and by April 13 afebrile. There was free drainage. That morning there was some vomiting of stercoraceous material. Enemas gave good results. There was very little distension and no pain. A stomach wash gave a quart. The tube was left in. April 15 a soft solid diet was again tried, but the patient again vomited a large amount of stercoraceous material. The tube was reinserted. There was considerable peristalsis, but no pain. He did not tolerate the nasal tube. Lavage with a large tube was done April 17. After it he again vomited a large amount of greenish fluid. The abdomen was slightly distended but not tender. He was given subpectorals. Profuse drainage continued. The following day there

was more distension and visible peristalsis. He was still vomiting.

That day, April 18, a second operation was done. The next day he was better. There was no vomiting and less distension, though peristalsis was still visible, and he still looked ill and had rapid and weak pulse and cold hands. April 20 the old wound was gaping and draining freely. The abdomen still showed active peristalsis but little distension. An enema produced a questionable small amount of gas. April 21 there was again abdominal pain and occasional vomiting. There was very little discharge from the second operative wound. The temperature was subnormal. The patient failed slowly and April 22 died.

DISCUSSION

BY EDWARD L. YOUNG, JR., M.D.

This is an interesting story. Sciatica is generally a symptom of some other condition; when we can't find any other primary cause then it is sciatica.

Where there is trouble with the sciatic nerve extension of that nerve will cause pain, and if we are to believe this story as told this did come on suddenly, as sciatica often does, and extension of the leg, that is flexing the thigh on the abdomen, caused pain. Then we go on to a second pain, and there flexion of the thigh was what gave relief. It is a question whether we can put those two things together as we go on.

Twenty centimeters is eight inches—that is a pretty big mass.

"The right leg and thigh were held flexed and could be moved, but extension and lateral rotation were painful." That means that the pain came not from tension on the sciatic nerve but from tension on the iliosacral group of muscles, which was interfered with by this mass. It seems to me that with a mass as definite as this it is fair to assume that all his pain may well have been the pain of interference with nerves going from this thing in the first place.

It is at once a question whether this process is a Pott's disease and the mass felt here a psoas abscess. In this length of time one would think that the damage to the bone, if it started in the bone, would be obvious in the X-ray plate. Of course also in the X-ray they are looking to see if there is a metastatic malignancy in the spine causing trouble, because it does happen not infrequently that bone metastasis of malignant disease may be the first manifestation of that disease. It seems to me that we can assume that the whole story hangs together and that the condition causing that mass is the condition causing all his trouble.

What are the possibilities? The iliopsoas abscess coming from Pott's disease is one thing to consider. Another is the thing that we always

put in in any intraabdominal condition of the right lower quadrant or elsewhere in the abdomen, an acute appendix with an abscess involving the tissue in that region. This history cannot be taken as very accurate. Malignant disease of the cecum, perforation with sepsis spreading to the pericecal tissues, pressure on nerves, involvement of the ileocecal glands and pressure there. A primary psoasitis, if you will. It is not common. We have seen a few cases here where there has been a suppurative process in the psoas muscle without known cause forming a large mass and causing a great deal of pain. It seems to me that those cover a large part of the conditions which are met with here.

Some of the rarer types of infection of the cecum, such as actinomycosis, do not as a rule have as acute an onset as this, and are very apt to result in spontaneous perforation. I think the blood picture and the temperature point very strongly to the inflammatory nature of this process.

I do not see any other way of helping this man than by operation.

Have you any light in the X-ray films, Dr. Camp?

DR. JOHN D. CAMP: I do not see anything in these films. The sacral spine is essentially normal. The film of the dorsal spine is not so good. I should hate to express an opinion on that. It is perfectly possible to have a tuberculous lesion up here and for it not to show on this plate. The sacroiliacs are negative.

DR. YOUNG: Is there any report of the rectal examination?

MISS PAINTER: Rectal examination is checked as negative.

DR. YOUNG: Just what order I would put those in I do not know. It seems hard to put appendix abscess first with all the story of intestine pain. He is in the cancer age rather than in the time of life when we should expect tuberculosis. I do not see anything to do but operate. If this is abscess give it drainage. If there is any malignancy try to recognize it at least. There is no evidence here of any intestinal obstruction. If it were a carcinoma starting in the cecum I should expect that before a mass of this size came it would be obstructing.

I should certainly put an inflammatory process first.

A PHYSICIAN: Is there any explanation of that nodule in the skin?

DR. YOUNG: I do not believe that was any more than a skin fibroma. I do not believe it was anything very important.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Iliopsoas abscess?

Acute appendicitis with abscess.

PRE-OPERATIVE DIAGNOSIS APRIL 9

Retroperitoneal abscess.

FIRST OPERATION

Under ethylene anaesthesia a right rectus incision was made. The tissues of the abdominal wall were edematous. A large mass was felt behind the cecum. The abdominal cavity was walled off with gauze and a large retrocecal abscess broken into on the outer side of the cecum, with the evacuation of a large amount of thick foul smelling pus. The abscess cavity was found to extend upward and backward along the posterior gutter for a considerable distance. The opening was made large enough to introduce a rubber drainage tube and two cigarette drains. No further exploration was made; the origin of the abscess was not discovered. It seemed like a retroperitoneal appendix abscess.

PATHOLOGICAL REPORT

A soft piece of gelatinous-like tissue from the abdomen showing on microscopic examination a loose fibrous structure filled with irregular festoons of mucous epithelium, clusters of mucos-distended cells, and free mucus.

Metastatic adenocarcinoma.

FURTHER DISCUSSION

In other words they found both conditions,—a carcinoma perforating with abscess.

Foul smelling pus is not the description of a tuberculous abscess.

A second operation was done, I assume on the basis of intestinal obstruction due to adhesions from the first operation.

DR. YOUNG'S PRE-OPERATIVE DIAGNOSIS

Intestinal obstruction due to adhesions.

PRE-OPERATIVE DIAGNOSIS APRIL 18

Intestinal obstruction.

SECOND OPERATION

Under local novocain a left rectus incision was made. A loop of distended small intestine was drawn up, clamped, and a small tube sutured in for a jejunostomy. It drained freely when opened.

FURTHER DISCUSSION

I don't think there is much to say about that except that he died. That description is like the gelatinous or colloid carcinoma which generally originates in the intestinal tract and grows very rapidly indeed when it gets outside to the peritoneum. I shall be interested to hear what Dr. Richardson has to say.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Adenocarcinoma, abdominal, with pelvic abscess.

Intestinal obstruction.

Incision and drainage of abscess.

DR. EDWARD L. YOUNG'S DIAGNOSIS

Carcinoma of the cecum.

Intestinal obstruction.

Peritonitis.

ANATOMICAL DIAGNOSIS

1. *Primary fatal lesion*

Gangrenous appendix with abscess formation and large area of purulent infiltration and necrosis involving the retroperitoneal tissues and the right psoas muscle.

2. *Secondary or terminal lesions*

General fibrinopurulent peritonitis.

Distension of small intestine.

3. *Historical landmarks*

Operation wounds.

Chronic peritonitis.

Slight chronic pleuritis.

Slight chronic perisplenitis.

DR. RICHARDSON: What did they do at the second operation?

DR. YOUNG: I cannot find that they did anything but a jejunostomy, put it in for drainage.

DR. RICHARDSON: The abdomen was hollow and the wall soft. There was the operation wound in the left lower quadrant, and a scar in the upper half of the abdominal wall. This necropsy was done 1524½ hours post mortem, so that there was some post-mortem change.

The peritoneal cavity showed general purulent peritonitis. There were a few old adhesions between the coils of the lower ileum. In the region of the appendix there was a mass of old adhesions which were more or less necrotic, purulent infiltrated, and which extended into the retroperitoneal tissues and involved the right psoas muscle. The right psoas muscle showed much necrosis and purulent infiltration. The process extended for some distance above and below into the retroperitoneal tissues. There was a short stump of appendix present which in the region of the wall of the cecum was negative, but its distal end showed marked necrosis and purulent infiltration. This end was lost in the mass of purulent infiltrated tissue mentioned. There was no evidence of new growth anywhere.

The esophagus and gastro-intestinal tract were negative. The small intestine was markedly distended, but otherwise negative. The large intestine was negative. The mesenteric and retroperitoneal glands were frankly negative.

The pleural cavities contained a moderate amount of thin brownish red fluid, probably post-mortem seepage. There were a few scattered old adhesions. The trachea, bronchi and bronchial glands were negative.

The pericardium and heart were negative, as were the aorta, the liver, gall-bladder, pancreas, spleen, and adrenals. The kidneys' combined weight was 317 grams. They showed no lesions.

The pelvis, ureters, bladder, prostate, seminal vesicles, and testes negative.

No evidence of the presence of new growth tissue was found anywhere. It is possible, of course, that the piece of tissue removed at the time of operation might have been a piece of disintegrated gangrenous appendix which might have been the seat of new growth tissue.

INSTITUTE FOR BOARD MEMBERS OF
PUBLIC HEALTH NURSING

THE New Haven Visiting Nurse Association in affiliation with the National Organization for Public Health Nursing has planned a four day Institute for Board Members of Public Health Nursing Organizations to be held in New Haven, Connecticut, from April 4-7. This institute will be of national scope including board members from the North Eastern States, Massachusetts to Virginia, and Maine to Indiana, while board members from any other states or Canada are invited to attend.

The program includes daily sessions from 8 A. M. to 8 P. M. with round table discussions, general meetings and luncheon and dinner meetings. The subjects under discussion include such problems as "The Organization of the Board and Its Relation to the Professional Staff"; "The Function of Board Members"; "Public Health Nursing in Its Relation to the Medical Profession"; "Mobilizing Public Support for Public Health Nursing"; "Financial Problems"; "Public Health Nursing in Its Relation to Social Agencies"; and "Education of Board Members."

All sessions of the Institute are to be held at Center Church House, 311 Temple Street, New Haven. Advance arrangements for registration, and reservations, should be made as soon as possible with Mrs. David S. Smith, Institute Treasurer, 35 Elm Street, New Haven, Connecticut.

THE COUNTY MEDICAL SOCIETY

One of the first steps in coöperation toward the common aims of scientific medicine is membership in the county medical society. This must be followed by an active interest in its activities.

Through medical organization, the collective thought of the physicians is focused upon the problems encountered and the solutions to be found. Medical organization makes possible the publication of your *Journal*, a consecutive record of developments in medical science, medical activities, medico-legal, medico-judicial, medico-social, and a host of other activities of direct interest to the physician. Medical organization offers the advantages of the medical defense plan. It affords the medium to represent group thought in governmental and civic affairs. It affords the fighting forces that combat assaults from hostile groups. It affords the medium for friendships and better understanding with colleagues. It affords the opportunity for keeping abreast with medical progress. And last, but not least, it places a stamp of competency and ability upon the physician in the community in which he resides.—Extract from editorial, *Ohio State Medical Journal*.

THE BOSTON Medical and Surgical Journal

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FIRST REPORT OF THE COMMISSION ON MEDICAL EDUCATION

THE Association of American Medical Colleges in 1924 appointed a committee to draw up a plan for the study of medical education based on the special conditions in this country. As a result of this appointment a "Commission on Medical Education" came into being, composed of individuals representing general education, the basic sciences, clinical teaching, public health, the medical profession and medical licensure, under the chairmanship of President A. Lawrence Lowell, of Harvard. Dr. Willard C. Rappleye, formerly superintendent of the New Haven Hospital and Professor of Hospital Administration in Yale University, became Director of the study. This commission began to function in the fall of 1925, financial support having been obtained from practically all the medical schools having membership in the Association of American Medical Colleges, from the American Medical Association, the Rockefeller Foundation and the Carnegie Corporation. A preliminary report of the commission was published in January, 1927.

According to this report the study has been approached with the thesis that medical educa-

tion concerns itself primarily with the qualifications and preparation of students to practice medicine; that "the training should be sufficiently broad and sound to serve as the groundwork for subsequent preparation for those who desire to go into one of the specialties of medical practice, into research in one of the sciences or in some branch of clinical medicine, into public health work, into medical teaching or into some field allied to medicine."

The collection of data has gone forward in various ways. In order to obtain information on the demands for medical service, a questionnaire was sent to over 500 recent graduates in medical practice in communities of 50,000 or less in twenty-four states and two provinces. An analysis of over 80,000 visits showed the following distribution of practice among the group reporting:

Office	55%
Home	35%
Hospital	10%
	100%

This was compared with and found similar to the demands made upon insurance doctors under the National Health Insurance Act of Great Britain. Other studies have been made of clinic visits from fourteen large cities, and of causes of absenteeism among school children, office employees and other groups. Over 90% of the illnesses were thus found to be of types that cannot be controlled on a community basis but are problems of individual patients.

A study of the distribution of physicians showed not only that the population per physician has increased considerably in the smaller communities, a fact that is already causing some alarm, but that there is also a moderate increase for the country as a whole, even including the larger cities. Part of the responsibility for this undue disproportion in the smaller communities is considered a result of some features of medical training, "especially the inevitable emphasis in the hospitals and during the internship on the major and most serious illnesses and the dependence on specialists, well organized hospitals, nursing, laboratory and consultant services (which) tend to make a recent graduate hesitate to assume the responsibility of individual practice in a small community."

In regard to the supply of physicians, many investigations have shown that their average age is rising, and with the natural increase in the population of the country, under present conditions of supply, the population per physician will also inevitably increase. Such studies have shown the importance of securing as early graduation from the Medical Schools as is consistent with maturity and previous education, and lend weight to the arguments advanced for shorten-

ing the time now devoted to elementary and secondary education.

The report goes on to consider the recruitment of students, based on a study of the disposition of applicants for admission to schools of medicine recently completed by Assistant Dean Burton D. Myers. About 20,000 bona fide applications for admission to the medical schools of the United States and Canada are now made annually, these applications coming, however, from only 8,900 individuals. Between 6,400 and 6,500 applicants are accepted, and for the first-year class of 1926-27, slightly over 5,200 were actually enrolled. In the last 10-15 years 73% of the matriculated students graduated. Between 1900 and 1925 college enrollment has registered a 700% increase with a reflected increase in most of the professions, but an actual decrease in medicine, explainable by the fact that prior to 1910 there was a considerable over-production of physicians.

The questionnaire sent out by the commission dealt also with questions relative to medical preparation, and from the replies received it became apparent that 80-90% considered themselves adequately trained in respiratory infections, obstetrics, minor medical complaints, minor surgery, gastro-intestinal diseases, children's diseases and general medical diseases; 70-80% in infant feeding, contagious diseases and surgical emergencies, and less than 70% in functional nervous disorders, nutritional disorders, eye and ear diseases and orthopedic conditions. In other words, and worthy of note, in a general way most practitioners felt that their training had been most satisfactory in the groups of diseases which they had reported as occurring most frequently in their practices.

The chief criticisms of their medical education were that:

1. There is overcrowding in the schedule of work throughout the medical course.
2. Much of the teaching in the science courses in both laboratory and theoretical work does not contribute to a sufficient understanding of these basic sciences upon which intelligent practice or other medical work depends.
3. Too much of the clinical teaching is from the standpoint of the specialist and on rare diseases, and not enough from the standpoint of the needs of most patients.
4. The divided responsibility for the care of patients and the impersonal attitude so frequently taken toward patients in the hospital and clinic handicap the preparation of students for the assumption of individual responsibility required in practice and for the large emotional and psychological factors seen in many illnesses.

No concrete tabulation of the defects in modern medical education are to be found in this preliminary report, nor should they expected, and of course no remedies can as yet be suggested. It is encouraging, however, to know that the

problem is being attacked from an analytical point of view. There has been much discussion recently concerning the virtues and faults of medical education. Nothing that is progressive can continue in a perfect state. Let us now wait for further reports of the commission.

REPORT OF COMMITTEE ON TRAUMATIC SURGERY

SURGEONS dealing with accident and workmen's compensation cases will find interest in the report of the research group of the committee on traumatic surgery of the American College of Surgeons. This committee, appointed in June, 1926, studied 2,105 cases furnished by the several insurance companies represented, and sent to well-qualified surgeons representing these insurance companies throughout the country a questionnaire. This questionnaire sought information on the type of surgeons doing such surgery; the tendency of industrial surgeons to retain cases and treat them even if beyond their skill; surgeons' fees in compensation work; the effort insurance carriers are making to secure the highest type of surgery; hospitals and their charges; value or lack of value of physiotherapy; control of surgical versus privilege of injured to select his own physician; traumatic appendicitis; increasing tendency of doctors and claimants to couple to the injury and disability arising through sickness on the theory of "aggravation"; advisability of adopting rules governing the maximum of cost of surgical obligation, and the fracture problem.

According to the results of this questionnaire it would seem that ill-qualified surgeons are giving treatment, also that the tendency towards communications has spread very rapidly. Of late years a number of insurance companies have endeavored to overcome this handicap. There is also a widespread tendency among doctors to continue in charge of a case when it is evident that they have neither the experience nor the skill to care for the injured successfully. As a rule it is conceded that the fee collected in traumatic cases is larger than that received for similar service among the same class of people if cared for as private patients.

It is brought out that insurance companies in the past have neglected to provide proper surgical service for injured employees of their assureds. In many instances the selection of the service has been left to the agent or the injured employee. It is felt that the insurance carriers are only partly responsible for this as they are largely forced into this situation by the indifference of the profession. Hospital charges have been considered satisfactory except that, generally speaking, the x-ray fees are excessive. Physiotherapy, as now rendered, is found to be of little value in the majority of cases. The carrier, through the hospital, should have control of the selection of the surgical staff to ren-

der treatment, as well as the selection of the hospital. Appendicitis should not be recognized as a condition growing out of injury. There is an increasing tendency of doctors and claimants to couple the injury and a disability arising through sickness. A fee schedule seems essential as a guide and should work no hardship because of the fact that it is realized that such a schedule cannot be made mandatory.

BOSTON POST ALSO HAS ITS CLINIC

THE JOURNAL has had occasion to remark several times in the past on the advertising policies of the *Boston Herald*. It is not fair to the *Herald*, however, to allow it to feel that it is the only black sheep in the Boston newspaper family. It is only necessary to draw attention to page 3 of the *Boston Post*, for Monday, February 28. Here the reader will be regaled with the sight of an entire page given over to an advertisement of a Hospital-Tested Remedy that Ends Colds in Thousands of New England Homes. The name, type and rating of the hospital that lends its services to Ayer's Cherry Pectoral is not given, but six individuals who ended their croupal troubles after a visit to the hospital cold clinic have an opportunity of displaying their photographs on this page.

A number of New England druggists have received free advertising on this page through virtue of carrying the hospital-proved medicine on their shelves. It does not seem fair the hospital conducting the proving clinic should not share in this reward.

THIS WEEK'S ISSUE

CONTAINS articles by the following authors:

TRUESDALE, PHILEMON E., M.D. Harvard Medical School 1898; F.A.C.S.; Member of the New England Surgical Society; Director of the Earle P. Charlton Surgery. His subject is: "Injury to the Kidney Without an Open Wound." Page 421. Address: Fall River, Mass.

ROBEY, WILLIAM HENRY, A.B.; M.D. Harvard Medical School 1895; Assistant Professor of Medicine Harvard Medical School. His subject is: "Dr. Robert Knox and the Edinburgh Murders." Page 427. Address: 202 Commonwealth Avenue, Boston.

JOHNSON, SALLY, R.N.; Superintendent of Nurses and Principal of the Training School for Nurses, Massachusetts General Hospital; President of the New England Division of American Nurses Association. Her subject is: "Report of the Massachusetts General Hospital Training School for Nurses." Page 433. Address: Massachusetts General Hospital, Boston.

HILL, T. CHITTENDEN, Ph.B.; M.D. Univer-

sity of Vermont Medical College 1895; F.A.C.S.; Ex-President, American Proctologic Society; Consultant, Rectal Department Boston Dispensary. Address: 315 Marlboro Street, Boston. Associated with him is

HAYDEN, EDWIN PARKER, A.B.; M.D. Columbia University College of Physicians and Surgeons 1919; F.A.C.S.; Assistant in Surgery, Harvard Medical School; Assistant, Out-Patient Department, Massachusetts General Hospital; Surgeon to Out-Patients, Huntington Memorial Hospital. Page 436. Address: 270 Commonwealth Avenue, Boston. They write on: "Progress in Proctology."

The Massachusetts Medical Society

MEMBERSHIP CHANGES

FROM JANUARY 1, 1927, TO MARCH 1, 1927

(See also changes made by the Council, February 2, 1927 in *Boston Medical and Surgical Journal*, February 17, pages 254, 255.)

WALTER L. BURRAGE, *Secretary*.

Akin, Moses, from Roxbury (Norfolk) to Rockaway Beach, N. Y. (Non-Resident List), 163 Beach Ninety-fifth Street.

Bartlett, Fred A., Atlantic (Quincy), office now Wolaston (Quincy), 308 Beale Street.

Bassow, George W., from Douglas, Ariz., to Littleton, Ohio, First National Bank Building.

Birdsall, C. H., Haverhill, from 50 Merrimack to 26 Summer Street.

Blake, J. Baptist, from Boston (Suffolk) to Brookline (Norfolk), 1727 Beacon Street.

1908 } Boos, William Frederick, Boston, 196 Beacon
1927 } Street. Restored to the privileges of fellowship by vote of Council, February 2, 1927.

Boss, Eugene G., from Boston (Suffolk) to Springfield (Hampden), 1537 Main Street.

Bowmar, Harris E., from Boston (Suffolk) to Dorchester (Norfolk), office East Weymouth, 655 Broad Street.

Bragdon, Horace E., now Winthrop, office East Boston, 7 Central Square.

Broughton, Henry White, died at Jamaica Plain, January 15, 1927, aged 75.

Buckley, James T., Worcester, from 6 Loudon Street to 769 Main Street.

Burt, Clarence E., New Bedford, from 544 County to 261 Union Street.

Caldarone, Angelo, died at Lawrence, January 29, 1927, aged 32.

Church, Claude H., from Yosemite, Calif., to Berkeley, Calif., 2055 University Avenue.

Cicma, H. G., from Worcester to Providence, R. I. (Non-Resident List), 282 Broadway.

Cosgrove, J. J., from Hornell, N. Y. (Non-Resident List), to Springfield (Hampden), 413 Belmont Avenue.

Cutler, Myron Fred, died at Webster, February 24, 1927, aged 47.

Davison, Arthur H., Dorchester, office now Mattapan, 76 Blue Hills Parkway.

Dexter, Franklin, died at Boston, January 18, aged 69.

Ehrenclou, A. H., New York City, from 45 East Fifty-fifth Street to 925 Park Avenue.

Ellison, George Washington, died at Spencer, February 14, 1927, aged 62.

Fallon, John M., Worcester. Temporary address, Rochester, Minn., 219 Sixth Avenue.

Foss, Ralph E., Peabody, from 107 to 125 Main Street.

Gay, William M., Saranac Lake, N. Y., from 31 Pine Street to 21 Franklin Avenue.

1908 } Geary, Cornelius Edward, Fitchburg, 78 Day
1927 } Street. Restored to the privileges of fellowship
by vote of Council, February 2, 1927.

1926 } Goff, Almon Pliny, Hyannis, Main Street.
(Omitted by mistake from both Alphabetical and
Local Lists of Directory.)

Goldberg, Hyman B., Dorchester, now 516 Blue Hill Avenue.

Grandmaison, A. J., Haverhill, from 85 to 115 Emerson Street.

Halbach, Robert M., from Pittsburg, Pa., to Philadelphia, Pa., Howard Hospital.

Hanscom, R. F., Washington, D. C., from 2633 Connecticut Avenue to 2400 Sixteenth Street.

Hirsch, Henry L., from Boston (Suffolk) to New York City (Non-Resident List), Hotel Knickerbocker, West Forty-fifth Street.

Hogner, Richard P. G., from Boston (Suffolk) to Chambers, Arizona, Navaho Indian Reservation, Klaz-e-Toh.

Holmes, Harry Bigelow, Adams. Take out of Alphabetical List.

Kaan, George W., from 419 Boylston Street, Boston, to Reading.

Konikow, M. J., Roxbury. Boston address: 636 Beacon Street.

Leary, Chrysostom John, died at New Bedford, February 8, 1927, aged 58.

Leary, Patrick Frank, died at Turner's Falls, January 21, aged 59.

Lee, Grace D. R., Allston, from 1263 to 1315 Commonwealth Avenue.

Levi, Alexander A., from North Grafton (Worcester) to Mattapan (Norfolk), Boston Sanatorium.

Lombard, Herbert L., from West Medford to Newton Center, office as before.

Lorimer, Felix, new address: Boston, P. O. Box 1675.

Macdonald, Wilfrid C., Somerville, from 115 Porter Street to 189 Summer Street. (Incorrectly entered as "McDonald.")

McMillan, Archibald, from Lawrence (Essex North) to Petersham (Worcester North).

Merrill, Ralph E., from China to Los Angeles, Calif., 1071 North Wilton Place.

Morrison, A. B., from Woodfords, Me., to Deer Isle, Me.

Morse, Irene May, from Clinton (Worcester) to Orange City, Fla. (Non-Resident List).

Myerson, Samuel William, Boston, 34 McLean Street. Name changed to Myers by Probate Court, January 13, 1927.

Newton, Harlan F., Roxbury, from Peter Bent Brigham Hospital to 386 Riverway.

Phelps, O. Draper, Worcester, from 452 Main Street to 27 Elm Street.

Pike, Forrest W., from Portsmouth, N. H. (Non-Resident List), to Stoneham, Mass. (Middlesex East), 339 Main Street.

Potter, Frances W., Boston, from 60 Westland Avenue to 204 Hemenway Street.

1929 } Redden, William Rufus, American Red Cross,
1927 } National Headquarters, Washington, D. C. Restored to the privileges of fellowship by vote of Council, February 2, 1927.

Reynolds, Francis A., Athol, from 498 Main Street to 42 Prospect Street.

Ricker, Carroll H., Worcester, from 452 Main Street to 27 Elm Street.

Riley, William B., Lawrence, from 333 Haverhill to 414 Essex Street.

Rudy, Abraham, from Dorchester (Norfolk) to New York City (Non-Resident List), 116 West Seventy-second Street.

Ryan, Robert Raymond, East Weymouth, 671 Broad Street, not Broadway.

Sachs, Benjamin, from Norwood to Brookline, office Boston, 483 Beacon Street.

Seaver, Edwin P., Jr., New Bedford. Now First National Bank Building.

Secondari, Epaminonda, from Framingham (Middlesex South) to New York City (Non-Resident List), 1245 Madison Avenue, corner Ninetieth Street.

Segal, Joseph N., Boston, 49 Chambers Street. Enter name in Boston Local List.

Shukle, R. M., from Boston (Suffolk) to Malden (Middlesex South), office Boston, 520 Beacon Street.

Silbert, Harry, Salem, from 195 to 221 Lafayette Street.

Swartz, J. H., from Roxbury to Dorchester, office Boston, 636 Beacon Street.

Stettler, Wayne D., Needham. Temporary address, Slatington, Pa., 356 First Street.

Stone, M. J., Dorchester, office now Boston, 636 Beacon Street.

Storer, Malcolm, Boston, from 476 Boylston to 302 Beacon Street.

Torney, George H., from Boston (Suffolk) to Brookline (Norfolk), office Boston, 48 Beacon Street.

Weise, Walter John. Change to "Wiese." From Connecticut (Non-Resident List) to Springfield (Hampden), 142 Chestnut Street.

Woody, McIver, from Springfield (Hampden) to Elizabeth, N. J. (Non-Resident List), Bayway Refinery.

Wright, Mary, died at Roxbury, January 13, 1927, aged 37.

Youngberg, P. P. Delete name from Worcester, Local List.

MISCELLANY

REPORT OF THE ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

THE Annual Congress on Medical Education, Medical Licensure and Hospitals was held in Chicago, February 14, 15 and 16, under the auspices of the Council of the American Medical Association on Medical Education and Hospitals, and the Federation of State Boards of Licensure in Medicine.

Dr. Bevan, the chairman, in his address voiced the sentiment of the Council in re-emphasizing the necessity for high character in the physician, and indicated the need of teaching medical ethics in the undergraduate medical course. There is a growing realization that a medical education is a powerful instrument which may be misused, and therefore it is a matter of deep concern that only the right kind of person morally should be given the privileges and carry the responsibilities of the physician. In the discussion there was pointed out the difficulty of changing the ethical standards of the adult: about all that can be done for the medical student is to indicate the way in which high ethical standards which it is presumed he already possesses are to be applied under the, to him, new conditions of the practice of medicine.

In spite of the opinion, often expressed, that medicine is becoming "too scientific" there is a

growing number of educators who hold with Naunyn that "only in science lies the salvation of medicine."

The re-organization of the School of Medicine at the University of Chicago exemplifies this latter principle and Dr. Franklin McLean, Professor of Medicine at that School, set forth ably the proposition that not only is research the prime function of the University but that training in the principles of research furnishes the soundest basis for practice.

That medical education is primarily education and secondarily medicine, and that most of the problems of medical education are common to other fields of education, and are therefore to be worked out by coöperation, was the thesis of the address by Dr. Charles F. Martin, Dean of the Faculty of Medicine, McGill University. He made many pertinent suggestions as to specific methods of coöperation.

It is generally held that the student of medicine should enter practice earlier than he does at present, the average age being twenty-eight. It is not generally held that the candidate is too well trained in medicine, and few suggestions have been made that the medical course should be appreciably diminished. It has been pointed out, however, that the same result as that obtained at present in secondary education can be secured with a saving of one or even two years, and President Wilbur of Stanford University again set forth cogently some reasons why a year can be, and should be, saved in the medical school by the adoption of the four quarter system. Thus the medical school would be in continuous session. The idea met with considerable approval and is generally growing in favor though for years after it was suggested by President Harper of Chicago little attention was paid to it by medical educators. Now it has been actually adopted by several medical schools. It is probable that the legal requirement of some states of "four courses of lectures in four calendar years" will disappear from the statute books before long.

President Wilbur suggested another change that merits careful consideration, and certainly experimental adoption in some school. It is that the fundamental sciences of Anatomy, Physiology and Bacteriology be freed from the trammels of the demands of medical education, taken out of the medical school, and placed in the non-professional department of the university. University departments of Anatomy and Physiology now exists in some institutions, but the plan should be widely adopted with the additional change in curriculum that the medical student will enter the medical school having completed fundamental (not exhaustive) courses in these basic sciences.

It has been said that the neglect of physiotherapy by the medical profession is the cause of

the development of many cults. In recent years valiant efforts have been made to reclaim this department of therapeutics, and what physiotherapeutics can do and how it should be done was set forth ably and succinctly by Dr. Frank B. Granger of the Boston City Hospital.

There is the possibility that neglect of preventive medicine may also cause a mushroom growth of cults, and the various aspects of the preventive side of medicine were emphasized by Dr. Waller S. Leathers, Professor of Preventive Medicine, Vanderbilt University School of Medicine, on two occasions. It is not that there should be more time devoted to it than the present schedule demands (120 to 160 hours) but that the attitude of the whole medical faculty, of the whole university, of the medical profession, and of the public should be changed. The importance of this subject is becoming recognized by stated boards of licensure but here also further coöperation is needed.

Over twenty years ago, Dr. Osler in his valedictory to the physicians of the United States and Canada said, "If there is one thing above another which needs a change in this country, it is the present hospital system in relation to the medical school. . . . In every town of fifty thousand inhabitants a good medical clinic could be built up."

Perhaps his prescient eye could have foreseen that some progress would be made through that group of students for whom he was so solicitous, the interns. But the most potent transforming idea at the present time in hospital administration is that the hospital has an educational responsibility to the patient, to the nurse, to the intern, to the staff, and to the community of which it may be the health center. Dr. George E. Follansbee, Chief-of-Staff, St. Alexis Hospital, Cleveland, discussed in considerable detail how the hospital and staff should perform their duty to the young doctor in training. Dr. Colwell gave an account of the change in the relation of the hospital to the medical school and to the education of the young physician, particularly since 1906. Although the number of positions for interns is about twice as great as the number of candidates, the number of approved internships in 575 general hospitals is 3825, for which there were 3962 graduates in 1926.

The demand for adult education in this country is evident among physicians no less than in other groups, perhaps more among physicians, as is indicated by the activities of county, state, interstate and national medical societies, described by Dr. Walter Bierring, Secretary-Treasurer, Federation of State Medical Boards. The ambitious program of the New York State Medical Society, with headquarters in Kings County, was described by Dr. Charles A. Gordon, Chairman of the Committee on Public

Health and Medical Education of the Medical Society of the State of New York. He said their slogan was, "Ask for anything you want, we will arrange it for you." Medical schools and even hospitals without medical schools may act as important educational centers.

The responsibility of making adequate provision for the health of a community rests upon several groups, among which may be mentioned the medical school, the medical profession and the state which has controlling power especially in protecting the community against incompetence. The state may not prescribe the system of treatment but it may decide on the qualifications of candidates desirous of practicing the healing art, as to scientific training and ability to recognize the conditions for which treatment is demanded. This is the theory of the Basic Science Act of Wisconsin, the workings of which were described by Dr. Edward Evans, Chief of Staff, St. Francis Hospital, La Crosse. Graduates of high schools are admitted to the examinations, which are in Anatomy, Physiology, Pathology, Chemistry, and Diagnosis. The candidates who pass these examinations then and then only take examinations for whatever system of treatment they desire, if it is recognized by the state.

This is a great improvement over the conditions in some states which constitute a scandal in health matters, and recently Connecticut also has adopted a basic Science Law. But a better system is to have a single standard as high as the intelligence and the enlightenment of the state justify, and make all candidates conform to this minimum standard of qualification. The system of therapeutics employed after licensure should be left in general to the conscience and judgment of the practitioner. The basic science law is therefore not approved in New York State and the system there was described by Dr. Harold Rypins, Secretary of the Board of Medical Examiners of the State of New York, who described at some length the procedure and results of prosecution of violators of the Medical Practice Act in New York since May, 1926. The three important steps in successful prosecution are to find the violators, to get the evidence, and to conduct the prosecution in court. Dr. Rypins regards as the sine qua non of successful enforcement an annual registration law for physicians. This is the quickest way of locating the violators. It also provides money for carrying on the work. Full time inspectors (licensed physicians) are also necessary. Women are often better than men. In accordance with the court decision in New York State an inspector posing as a patient is not particeps criminis. The prosecution is especially difficult as often the best legal talent is employed by the violator and resort is had to innumerable delays. Also it is likely that appeal will be made to the highest

court. It is important to remember that it is not the number of prosecutions that is the important element, it is the inexorableness of the prosecution that counts. Since May 1926 it is estimated that 500 violators have left New York State.

There were a number of other very interesting papers, notably on "Graduate Medical Education in Europe in 1926," by Dr. Louis B. Wilson, Director of the Mayo Foundation, and "Medical Education for the General Practitioner," by Dr. William J. Mayo.

The Preliminary Report by the Commission on Medical Education has already been printed, and will be commented on elsewhere. Dr. Willard C. Rappleye, of New Haven, Director of the Study, presented some excerpts, the results of Statistical and Actuarial Studies.

LECTURE ON INDUSTRIAL SILICOSIS

A LECTURE, under the auspices of the Harvard Public Health School, was delivered Thursday afternoon, February 17, at Harvard Medical School, by Dr. Edgar Collis, Talbot Professor of Preventive Medicine, Welsh National School of Medicine, Cardiff, Wales, on "Silicosis."

Dr. Collis first discussed the industries in which Silicosis is manifest. Slides were shown showing men at work grinding stone. Gray sand stone was given as one source of silica, and the mortality from phthisis among sand stone workers was given as three times that of other stone masons. In underground work where rock boring is done preparatory to exploding, dust infections were shown to be numerous.

Dr. Collis stated that emery dust inhaled sets up an inclination to bronchitis if it settles in the bronchi, and if the smaller bronchioles and alveoli are reached there is an inclination to pneumonia. These conditions were given as typical of insoluble dusts. Another group of dusts, more or less soluble, in addition to bringing about the above effects, participates in a chemical reaction in the alveoli, in which the result is a fibrosis and a silicosis with a tendency to tuberculosis. Thus the silicotic group of dusts has a tendency to bronchitis, pneumonia, and phthisis, also there seems to be a tendency to Bright's Disease.

Dr. Collis discussed the metal grinders in relation to silicosis, and stated that the mortality in this group of workers from phthisis was high. In these cases the dust having gained the alveoli are picked up by the macrophage cells of the alveoli, which in turn are carried through the lung tissue, where the silica is slowly absorbed, killing the cells, which then deposit their burden semi absorbed, in the lymph nodes of the lungs. The damaged lung tissue is repaired by

granulation tissue, and a condition of fibrosis results.

Dr. Collis stated further that the clinical picture of silicosis does not in itself strike one as causing great disability. The usual symptom is merely shortness of breath. Only a few deaths ever occur from simple silicosis, and it is not the usual cause of death. The usual thing is a secondary infection with tuberculosis. The very changes which take place in the lung from silica prepare the way for tuberculosis infection. This has been borne out by experiments on animals by Professor Kettle of England. In these experiments, soluble silica injected into mice lungs have shown that a necrotic focus results. Pure flint dust injected into the lungs also caused a similar necrotic focus, but here the condition occurred much later than when the soluble silica was injected. It is evident that the silica is absorbed into the lung tissue and reacts chemically with the lung tissue. Any tubercle bacillus present in the lungs will flourish exceedingly in the lung tissue so affected by silica. This explains the large mortality from tuberculous silicosis.

Groups of men employed in metaliferous mines, granite workers, and stone workers who use the percussive drills seem especially susceptible to tuberculous silicosis according to Dr. Collis.

CORRESPONDENCE

AN EXPLANATION AND EXPRESSION OF REGRET BECAUSE OF THE PUBLICATION OF ADVERTISEMENTS OF THE KOCH CANCER FOUNDATION

New York State Sanitary Officers' Association
Office of the Secretary

Cambridge, New York,
March 8, '27.

Editor, Boston Medical and Surgical Journal:

My attention has been called to an article appearing in the January number of the *Bulletin of the Koch Cancer Foundation*, which reprints an editorial from your journal commenting on an advertisement that appeared in our 1926 Official Manual and Register.

I enclose herewith copy of a circular letter which has been sent to every Health Officer in New York State and which explains this unfortunate occurrence.

For your information also as to the nature of our organization, which is *not connected with the State Department of Health*, I enclose copy of a form letter which is sent to every newly appointed Health Officer.

Trusting that the motives of this Association may be more thoroughly understood and our position not too severely criticized, believe me,

Yours very truly,

WALTER A. LEONARD, Secretary,
New York State Sanitary Officers' Association.

New York State Sanitary Officers' Association
Office of the President

February 25, 1927.

To the Sanitary Officers:

The 1926 Manual has been subjected to criticism for certain advertisements that appeared in its pages, and we believe that a few words of explanation are due the members of this Association.

The Koch Synthetic Antitoxin advertisement and the article entitled "Newer Cancer Therapy" have been objected to and we are willing to admit that these criticisms are justified. We regret that these advertisements were accepted and confess that their appearance was due to an oversight on the part of those whose duty it was to censor the advertisements appearing in the Manual.

We wish to assure the readers of the Manual that the assumption which the Koch Cancer Foundation makes that this Association gives its endorsement to their method is entirely unwarranted.

As to the efficacy of the Koch Antitoxin we know nothing, but we wish it distinctly understood that this Association is not espousing the cause of the Koch Foundation in opposition to the position already taken by the American Medical Association and the American Society for the Control of Cancer.

We also wish to assure the members of the Association that, in the future a more rigid censorship will be exercised with regard to applications for advertising space in the Manual, and that the same high tone in advertisements and text will characterize the future editions that made our publications so valuable and interesting in the past to the members and the public.

Yours very respectfully,

STANTON P. HULL, President.

New York State Sanitary Officers' Association
Office of the Secretary

Cambridge, N. Y.,

Dear Doctor:

I have been notified by the Department of Health of your appointment as Health Officer of and, in behalf of the New York State Sanitary Officers' Association, I wish to congratulate you on the appointment.

As you are, perhaps, not acquainted with the purpose and scope of this organization, I take this opportunity to inform you that the New York State Sanitary Officers' Association is not connected officially with the State Department of Health, but is an entirely independent organization, composed of Health Officers, Health Officials, and others active in any branch of Public Health work.

The purposes of our organization are to secure needed legislation, both state and local, to improve methods of local administration, to protect the interests of, and obtain proper recognition for the Sanitary Officer, both for the office and the man.

As all Health Officers automatically become members of this organization, you will share in the benefits to be derived from such membership.

We are issuing a manual each year to every Health Officer, which gives a complete roster of all Health Officials of the State and much other valuable information.

Dues are \$2.50 per year, payable on or before annual Conference. Remittance may be made to either the Secretary or Treasurer.

Hoping to have the pleasure of enrolling you as an active member in our Association, as well as to have the encouragement of your cooperation in the work, believe me,

Yours very truly,
, Secretary.

VACCINATION QUESTION

The following letter of Dr. S. B. Woodward appeared in the *Fall River Herald News*, March 4, 1927:

Editor of the Herald News:

Last Monday at the State House in Boston Dr. N. E. Padelford of Fall River told the Legislative Joint Committee on Public Health that a large number of physicians in your city agreed with him that compulsory vaccination of children in our schools should be abolished.

Interested as I am in child welfare, I am wondering why the medical profession in your section is so out of step with that of the rest of the State. I am also prepared to be surprised, as we were told we would be, should Dr. Padelford make public the names of those who have so expressed themselves. I had supposed that the medical profession was practically a unit in the belief that vaccination was a useful measure. Has that portion of it residing in Fall River decided that it is not, or is Dr. Padelford drawing on his imagination when he makes such a statement?

SAMUEL B. WOODWARD,
President Massachusetts Child Welfare Association.

We hope that Dr. Padelford's friends will allow him to submit their names.

FURTHER SUPPORT OF ANTI-QUACK POLICY

Mr. Editor:

I think you are doing a fine work.

The Coffee ad and the I-on-a-Co (pages 69-72, *Hygeia*, February, 1927) article show the job to be endless.

The present laws and patent regulations do not meet the requirements. While the action of the advertising clubs is commendable, they, too, fall short of the requirements.

As I understand it, most States—and there can be a like Federal requirement—require registration of doctors, etc.

If such patents and articles or ads were required to pass certain boards and be registered before the granting of patents and advertising, perhaps the situation could be brought into line with less effort and expense.

The farm journals are full of Coffee stuff—the February 5, 1927, *Pathfinder*, a weekly journal of almost a million circulation, published at Washington, D. C., had a full page Coffee ad—the last page at that, outside cover; page 45 had the old wing ear drum, and there were other medical ads of the same nature.

This reaches the very class of readers that need to be educated the most against quackery.

Sincerely,
A. J. CANFIELD.

49 Inman Street, Cambridge, Mass.
February 17, 1927.

REPLY TO EDITORIAL

March 9, 1927.

Editor, Boston Medical and Surgical Journal:

On an editorial page of the issue of March 3, 1927, you ask for enlightenment concerning the attitude of the Committee on Ethics and Discipline concerning alleged fraud on the part of a member of the Massachusetts Medical Society, unnamed. If you or any other member will present any proof of such fraud which you, or he, may have, in writing, as pre-

scribed by the By-Laws, or any information which may lead to the securing of such proof, the Committee will be deeply obligated and will endeavor to furnish enlightenment through prescribed channels.

Yours truly,

DAVID CHEEVER, *Chairman*,
Committee on Ethics and Discipline,
Massachusetts Medical Society.

NOTE:—We submit a copy of the section of the By-Laws of the Massachusetts Medical Society referred to by the Chairman of the Committee on Ethics and Discipline:

Chapter VII Section 4—"The committee on ethics and discipline shall consist of five fellows. It shall consider charges submitted in writing against any fellow alleging infraction of the by-laws, failure to conform to the code of ethics, or any other conduct unworthy of honorable physicians; shall call to the attention of such fellow the nature of the charges and request an explanation; and in due course, if deemed advisable, it shall report the charges to the president with recommendations. It may also, upon its own initiative, investigate any case of apparent or alleged misconduct of a fellow and if deemed advisable, report its findings to the president with recommendations. In case coming to trial as provided for in Chapter VIII, Section 1, the chairman or some other member of the committee shall act as prosecuting officer.

"It shall be the further duty of the committee to consider and report on matters referred to it by the society.

"On or before the fifteenth of January in each year, this committee shall forward to the chairman of the committee on membership and finance an estimate of the expenses of the committee for the current year. All bills incurred shall be countersigned by the chairman and forwarded to the president for his approval."

LEGISLATIVE NOTES

CHANGES IN THE WORKMEN'S COMPENSATION ACT

THE Committee on Labor and Industries has reported in Senate 239 its recommendations regarding changes in the Workmen's Compensation Act. The suggested changes of interest to physicians are as follows:

Section 1 is to be amended by adding the sentence "All medical records and reports of hospitals, clinics, and physicians of the insurer or of the employee shall be open to the inspection of the department so far as relevant to any matter before it."

The section would then read "Copies of hospital records kept in accordance with section seventy of chapter one hundred and eleven, certified by the persons in custody thereof to be true and complete, shall be admissible in evi-

dence in proceedings before the department or any member thereof. The department or any member before admitting any such copy in evidence may require the party ordering the same to produce the original record. All medical records and reports of hospitals, clinics, and physicians of the insurer or of the employee shall be open to the inspection of the department so far as relevant to any matter before it."

In Section 4 it is proposed that the much disputed section dealing with the furnishing of medical and hospital services be amended by adding after the words "unusual cases" the clause "or cases requiring specialized or surgical treatment" and later with reference to medical and hospital services the words "together with the expenses necessarily incidental to such services," the section would read thus:

"During the first two weeks after the injury, and, if the employee is not immediately incapacitated thereby from earning full wages, then from the time of such incapacity, and in unusual cases, or cases requiring specialized or surgical treatment, in the discretion of the department, for a longer period, the insurer shall furnish adequate and reasonable medical and hospital services, and medicines if needed, together with the expenses necessarily incidental to such services. The employee may select a physician other than the one provided by the insurer; and in case he shall be treated by a physician of his own selection, or where, in case of emergency or for other justifiable cause, a physician other than the one provided by the insurer is called in to treat the injured employee, the reasonable cost of his services shall be paid by the insurer, subject to the approval of the department. Such approval shall be granted only if the department finds that the employee was so treated by such physician or that there was such emergency or justifiable cause, and in all cases that the services were adequate and reasonable and the charges reasonable. In any case where the department is of opinion that the fitting of the employee with an artificial eye or limb, or other mechanical appliance, will promote his restoration to industry, it may order that he be provided with such an artificial eye, limb or appliance, at the expense of the insurer."

If the recommendations are adopted by the Legislature the free choice of physicians will be retained and in the discretion of the department the physician shall be paid for longer than the specified two weeks. The words "specialized or surgical treatment" obviously include expert medical attention, measures for rehabilitation and the surgical care of patients necessarily requiring more or less prolonged treatment. So far as these particular matters are concerned the Committee favors granting all that physicians reasonably ask.

The committee on Public Health has reported

in House 1104 an amended draft of the "Lye Bill." It is earnestly to be hoped that this measure to safeguard the lives of children and others may be passed. It will supplement the national bill.

The Committee on Public Health also reports House 1085 to increase the penalties for the illegal practice of medicine.

HOUSE BILL 58 asking for an investigator for the Board of Registration in Medicine was not endorsed by the Committee on State Administration.

Information has reached the Committee on State and National Legislation of the Massachusetts Medical Society that a bill to provide for the registration of Chiropractors will be presented by the Committee on State Administration, probably based on House bill No. 646. The bill has not been published.

The Committee has sent a circular of information with respect to this bill to all members of the Massachusetts Medical Society with the expectation that our members will interview their representatives and senators and explain the fact that the passage of this bill will undermine the hitherto accepted policy of this state which has maintained a single standard governing medical practice. Although the chiropractors contend that they do not practice medicine, history has demonstrated that the licensure of cults has always opened the door to medical practice, and there is no reason to expect that chiropractors will restrict their activities to manipulation of the spine. But assuming that chiropractors will not attempt to treat human disorders by methods beyond the chiropractic manipulations, the very obvious danger in the failure to cooperate in public health measures must be apparent to physicians, because the discomforts of communicable diseases may not be recognized by unskilled diagnosticians as having public health importance.

Nobody objects to having chiropractic treatments administered by educated physicians and we believe that all remedial measures should be carried on by practitioners who may be able to pass the present legal requirements.

It is expected that members of the State Society will do their duty.

The Petition by Dr. G. H. Bigelow, Commissioner of Health, with respect to the prevention of typhoid fever by regulations controlling typhoid carriers was given the recommendation of the Committee to be passed to the next annual session.

Dr. Woodward's plea for the extension of compulsory vaccination to pupils of private schools did not meet the support of the majority of the Committee on Public Health. We are especially pleased to state that under the leadership of Mr. Slater Washburn of Worcester the House has substituted the bill for the ad-

verse report of the Committee. The vote in favor of the bill was 96 to 49.

If the Senate will vote in favor of this bill the years of effort by Dr. S. B. Woodward will be crowned with success.

The Recommendation of the Governor that the Board of Registration in Medicine be given power to pass on the qualifications of medical schools was not endorsed by the Committee on Public Health and will be referred to the next annual session.

CASES REPORTED TO THE MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH FOR THE WEEK ENDING FEBRUARY 26, 1927

Anterior poliomyelitis	1	Pellagra	1
Chickenpox	292	Pneumonia, lobar	118
Diphtheria	100	Scarlet fever	588
Dog-bite requiring anti-rabic treatment	9	Septic sore throat	2
Epidemic cerebrospinal meningitis	1	Suppurative conjunctivitis	6
German measles	4	Syphilis	33
Gonorrhea	53	Trachoma	2
Influenza	18	Tuberculosis, pulmonary	104
Measles	239	Tuberculosis, other forms	15
Mumps	292	Tuberculosis, hilum	3
Ophthalmia neonatorum	23	Typhoid fever	7
		Whooping cough	125

CONNECTICUT DEPARTMENT OF HEALTH

MORBIDITY REPORT FOR THE WEEKS ENDING FEBRUARY 19 AND 26

Diphtheria	41	Diphtheria	27
Last week	31	Last week	41
Diphtheria bacilli carriers	8	Diphtheria bacilli carriers	11
Scarlet fever	118	Scarlet fever	107
Last week	101	Last week	118
Typhoid fever	3	Measles	139
Last week	0	Last week	89
Measles	89	Whooping cough	36
Last week	121	Last week	49
Whooping cough	49	Bronchopneumonia	33
Last week	54	Chickenpox	107
Bronchopneumonia	51	German measles	3
Cerebrospinal meningitis	2	Influenza	18
Chickenpox	88	Mumps	36
German measles	58	Pneumonia, lobar	41
Influenza	14	Septic sore throat	1
Malaria	1	Trachoma	1
Mumps	31	Tuberculosis, pulmonary	24
Pneumonia, lobar	41	Tuberculosis, other forms	6
Septic sore throat	6	Gonorrhea	14
Tuberculosis, pulmonary	44	Syphilis	25
Tuberculosis, other forms	5		
Gonorrhea	17		
Syphilis	15		

MORBIDITY REPORT FOR THE WEEK ENDING MARCH 5, 1927

Diphtheria	29	Measles	146
Last week	27	Last week	138
Diphtheria bacilli carriers	2	Whooping cough	52
Scarlet fever	96	Last week	36
Last week	107	Typhoid fever	1
		Last week	0

Bronchopneumonia	34	Pneumonia, lobar	53
Cerebrospinal meningitis	1	Septic sore throat	2
Chickenpox	107	Tuberculosis, pulmonary	29
German measles	7	Tuberculosis, other forms	3
Influenza	7	Gonorrhea	21
Malaria	1	Syphilis	27
Mumps	55		

NEWS ITEMS

WOMAN DOCTOR MEDICAL EXAMINER—The daily press has made considerable news of the fact that Dr. Frances A. Kenyon, recently appointed medical examiner of the towns of Charlestown and Richmond, R. I., is probably the first woman to hold such a position in the United States.

A BEQUEST TO THE SOMERVILLE HOSPITAL—Ella A. Fitch of Somerville, Mass., recently deceased, has left five thousand dollars to the Somerville Hospital for a fund to be known as the Albert and Almira Fitch Fund in memory of her parents for the maintenance of a free bed.

THE NATIONAL NEGRO HEALTH WEEK—The week of April 3 to April 10, 1927, has been set aside for the thirteenth observance of National Negro Health Week. State and municipal health departments, voluntary health organizations, and numerous other agencies interested in race welfare and advancement are cooperating with the Public Health Service in a determined effort to improve health and living conditions.—*United States Daily*.

NOTICES

REMOVAL

DR. JOHN BRYANT has removed his office from 338 Marlborough Street to 282 Berkeley Street. Telephone number Back Bay 10100.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Junior Medical Officer (Interne)

Applications for junior medical officer (interne) must be on file at Washington, D. C., not later than June 30, 1927.

The examination is to fill vacancies in United States Veterans' Bureau hospitals throughout the United States, and in positions requiring similar qualifications.

The entrance salary in the field service of the Veterans' Bureau is \$1,860 to \$2,400 a year, without allowances, or \$1,260 to \$1,860 a year with quarters, subsistence and laundry, the entrance salary within the range stated depending upon the qualifications of the appointee as shown in the examination and the duty to which assigned.

The duties, under immediate supervision, are to admit patients, take histories, make physical and mental examinations and record findings; to make ward rounds of inspection, note charts, record observations; to prescribe for minor ailments or for acute or emergency cases, and to dispense medicine in emergency; to perform minor surgical operations and to assist at major operations and in redressing; to administer anesthetics; to make routine laboratory tests and analyses; to assist at out-patient clinics in

dressing and in administering vaccines; to keep records, make up case histories, answer correspondence relating to patients, and compile statistics requiring medical training.

Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house in any city.

UNITED STATES PUBLIC HEALTH SERVICE

CHRONOLOGICAL LIST OF CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

MARCH 2, 1927

Sanitary Engineer L. C. Frank—Directed to proceed from Montgomery, Ala., to New Orleans and other cities in the State of Louisiana, and return, in connection with milk investigations—February 16, 1927.

Assistant Sanitary Engineer L. D. Mars—Bureau orders of January 29, 1927, directing him to proceed from San Francisco, Calif., to Washington, D. C., for examination, amended so as to direct him, upon return to station, to stop at Chicago, Ill., Cincinnati, Ohio, and St. Louis, Mo., for conferences regarding water certification procedure for interstate carriers—February 19, 1927.

Surgeon G. A. Kempf—Directed to proceed from Washington, D. C., to Hagerstown, Md., and return, in connection with field investigations in child hygiene—February 24, 1927.

Assistant Surgeon E. R. Coffey—Relieved from duty at Ellis Island, N. Y., and assigned to duty at Jefferson City, Mo., in connection with studies of and demonstrations in rural sanitation—February 24, 1927.

Surgeon L. L. Williams, Jr.—Directed to proceed from Richmond, Va., to Washington, D. C., March 7, and return, for conference at the Bureau—February 25, 1927.

Surgeon A. D. Foster—Directed to proceed from Norfolk, Va., to Charlottesville, Va., and return, in connection with matters relating to the care of Service patients—February 26, 1927.

Surgeon G. C. Lake—Directed to proceed from Washington, D. C., to New York City, February 28, and return, in connection with measures for the control of venereal diseases—February 26, 1927.

Surgeon T. J. Liddell—Relieved from duty at Washington, D. C., and assigned to duty at Stockholm, Sweden—February 26, 1927.

Surgeon A. R. Sweeney—Directed to proceed from Boston, Mass., to Rosebank, S. I., N. Y., March 7, for temporary duty at the New York Quarantine Station—February 26, 1927.

Surgeon B. S. Warren—Bureau orders of January 11, 1927, directing him to proceed from Baltimore, Md., to Philadelphia, Pa., and return, to investigate a claim against the United States Employees' Compensation Commission, revoked—February 26, 1927.

Official:

H. S. CUMMING, *Surgeon General.*

REPORTS AND NOTICES OF MEETINGS

BOSTON MEDICAL HISTORY CLUB

The Boston Medical History Club meets at the Boston Medical Library, Friday, March 25, 1927, at 8:15 P. M.

PROGRAM

- a. Ludwig Traube. By Dr. H. Morrison.
- b. Bleeding and Leeching (Illustrated with lantern slides). By Dr. Townsend W. Thorndike.

HENRY R. VIETS, M.D., *Secretary.*

STAFF CLINICAL MEETING

STAFF Clinical Meeting, Boston City Hospital, Cheever Surgical Amphitheatre, Saturday, March 26, 1927, at 11 A. M.

Demonstration of cases by members of the Medical and Surgical Staff. Discussion of the cases invited.

Physicians, medical students and nurses invited.

JOHN J. DOWLING, *Superintendent.*

CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

SEVENTEENTH ANNUAL SESSION, DETROIT, MICHIGAN, OCTOBER 3-7, 1927

THE annual meeting of the Clinical Congress of the American College of Surgeons will be held in Detroit, October 3 to 7, 1927. The Book Cadillac and Statler Hotels will be used as headquarters, the registration headquarters being at the Book Cadillac.

FRANKLIN H. MARTIN, M.D.,
Director General.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

CLINICAL PROGRAM

- I. A case of Pyloric Stenosis, Dr. Williams.
- II. A case of Post Encephalitic Parkinson's Disease, Dr. Davis.
- III. Autopsy Findings in a Case of Multiple Myeloma, Dr. Damsky.
- IV. Hernia Funiculi Umbilicalis, Dr. Mangán.
- V. Some Surgical Cases, Dr. Blair.
- VI. An unusual case of Alopecia, Dr. Bedard.
- VII. A case of Peripheral Neuritis, Dr. Viets.
- VIII. Some Medical Cases, Dr. Hearn.
- IX. A case of Acrodynia, Dr. Briggs.
- X. Strangulation of Testicle from Torsion of Cord, Dr. Harold A. Johnson.

HAMPSHIRE DISTRICT MEDICAL SOCIETY

THE March meeting of Hampshire district was held on the second day of the month, the address being delivered by Dr. Paul N. Jepson on "Common Fractures of the Upper Extremity," illustrated with lantern slides. Dr. Jepson has been on the permanent Orthopedic Staff

of the Mayo Clinic and has just come to Boston to locate in the practice of his specialty. The address was of great interest and was enthusiastically received.

LUTHER O. WHITMAN, *Secretary.*

NEW ENGLAND ROENTGEN RAY SOCIETY

The fourth meeting of the New England Roentgen Ray Society for the year 1926-27 was held at the Boston City Hospital, January 21, 1927. This meeting was combined with the Mid-winter meeting of the Section of Radiology and Physio-Therapy of the Massachusetts Medical Society.

The morning program was a demonstration by Dr. Granger and his assistants in Practical Methods of Physio-therapy, X-ray and Radium. The afternoon session was as follows:—

1. The Treatment of Fractures, with Special Reference to the Use and Abuse of Physio-Therapy.—Dr. Frederick J. Cotton. This paper was discussed by Dr. Otto J. Herman.

2. Electrical and Surgical Methods in Tonsils. Dr. William D. McFee of Haverhill.

3. Melanoma (demonstration of case). Dr. Frederick W. O'Brien.

At the evening session Dr. Frank B. Granger, chairman of the section and Dr. Frederick W. O'Brien, secretary, turned the meeting over to Dr. Philip H. Cook of the Roentgen Ray Society.

After a short business session Dr. Cook introduced Dr. Douglas Quick of the Memorial Hospital, New York City, who spoke on the treatment of intra-oral new-growths. He said in part that it was unfair to consider the treatment of intra-oral cancer by either surgery, radiation or electro-coagulation alone, but that the proper method was to use each as indicated and to consider each patient an individual case. Surgery has progressed much farther than radiation, and when radiation has developed the technique and experience now used in surgery, a proper comparison of the two methods can be made. Until then it is unfair to compare the results of either method. At the present time he considers radiation as an adjunct to surgery and uses the X-ray and radium as surgical weapons.

In mouth lesions the first thing to be done is to determine whether or not radiation is to be used in the hope of securing complete regression or merely as a palliative agent. In the latter case there is no justification for untoward reactions. In handling the primary lesion in the mouth a very important preliminary step is to clean up the infection which is usually associated with new-growths in this location. This is followed by high voltage X-ray therapy externally, including the neck. This helps clear up the infection, gives partial regression of the tumor, and allows the use of less radium intra-orally. For the latter buried emanation tubes are used. Instead of glass seeds they are now

using gold tubes 0.3 mm. in thickness. This gives much less tissue reaction as most of the radiation is by gamma rays, and it allows a much more evenly diffused radiation. Surgery is used but not primarily for cure. Its indications are (1) drainage and exposure, for example in carcinoma of the antrum; (2) resection of bone involved by the carcinoma, as radium has no permanent beneficial effect in such cases; (3) for the removal of condemned tissue. In such cases the ordinary cautery is used. A routine block dissection of the neck is no longer used for the following reasons: (1) many cases do not metastasize, (2) the spread is usually by embolism and the glands are the first line of defense, (3) intact cervical glands may limit the spread of the disease; (4) the average block dissection is frequently incomplete, (5) in case metastases do occur the removal of a gland with an intact capsule is usually a safe procedure.

Dr. Quick then gave some recent figures covering a series of cases from 1917 to 1924 who appeared at the clinic without involvement of the glands of the neck, in whom the primary lesion was in the mouth, and in whom no metastatic nodes appeared during the course of radiation. These cases all had radiation of the neck by high voltage X-ray or by a radium pack. The figures were astonishing, varying from 92% of the carcinomas primary in the soft palate, to 60% or those primary in the tongue. (Carcinoma of the lip, for example, with 233 cases, in whom 210 or 90% showed no metastatic glands during the period of treatment.)

Dr. I. J. Walker, in discussing the paper, said that the degree of malignancy (after Broda) influenced the outcome more than any choice or method of treatment. In his experience radiation was inferior to surgery. The latter gave 30% of cures in 3 years, as compared to 8% by radium. Only one case of all those having metastases in the neck was cured by radiation. In closing he advocated surgery followed by prophylactic radiation.

Dr. R. B. Greenough in discussing the paper said that the delay of five years which was necessary before judging results had hampered the development of technique, and he regretted that we could not put our present results forward as in all probability they will give a higher percentage of five years cures. Comparisons are rather inaccurate, due to the inability of determining facts,—for example, dissection, only six of them showing metastatic carcinoma under the microscope. Even this is inaccurate as complete sections of all the glands could not be made. He said further that block dissection adds a definite percentage of risk and that if there were no involvement this risk should not be undertaken, especially as metastasis from intra-oral carcinoma is usually embolic with no strands of cells to be cut across. Removal of the original lesion, however, was advocated by Dr. Greenough as

the wound healed more promptly and the histological grade of malignancy could be determined. Post-operative radiation or dissection of the neck was then decided upon, depending upon the grade of malignancy.

Dr. G. W. Holmes stated that in his opinion there was no justification for pushing external radiation to the point of an erythema in patients who may get well, as every erythema is eventually followed by the unpleasant sequelae of skin atrophy, telangiectasis, or even skin cancer.

Dr. Quick, in closing, emphasized that the figures he presented were not cures, but were the percentages of people who remained free from neck metastases. As to cures he quoted the figures on carcinoma of the tongue of which there were 414 cases between January 1, 1917, and December 31, 1924. Of these, 85, or approximately 20%, were free from all disease after radiation treatment. This is approximately equal to the percentages obtained by good surgery. In answering Dr. Holmes' criticism he stated frankly that they were taking a gambling chance with a lethal disease, rather than giving consideration to cosmetic results. A 10,000 M.C. pack at 2 cm. distance with a 2 mm. brass filter is now used on the neck as prophylactic treatment.

Dr. Stuart Pritchard of Battle Creek, Mich., next presented his paper on the Supraglottic Injection of the Bronchi with Lipiodol. He first explained the properties and development of lipiodol, referring to Mendel of Paris, who first showed that oil was less irritating to the mucosa of the respiratory tract than was an aqueous solution. He discussed the bronchoscopic, transglottic, and subglottic methods, all of which have their advantages. The supraglottic method in his opinion was the simplest of all. There were no serious effects in 1,000 consecutive cases of supraglottic injection of lipiodol. Eleven or twelve patients swallowed some of the lipiodol and Dr. Pritchard warned his audience that if this happened iodism might result as the oil was quickly digested, and the iodine rapidly absorbed.

He then explained his technique which was first cocaineizing the larynx by a spray of 2-4% cocaine. After instructing the patient carefully that he was not to cough or swallow during the injection the tongue was then pulled forward as far as possible and the injection made with a 30 cc. syringe and a curved cannula. He was careful not to touch the epiglottis; to inject not more than 15-20 cc.; to use the oil and instruments warm, and to secure as complete cooperation as possible. In the latter point it was important to have as few instruments and as few spectators as possible. The injection ordinarily consumed only 60-80 seconds, and the position

of the patient during the injection or immediately afterward determined which part of the lung the lipiodol filled. He then demonstrated several cases of bronchiectasis, in which he said lipiodol was not only valuable in diagnosis, but also in therapy. He classified the bronchiectases by their appearance on the X-ray plate as grape-like, sacular and cylindrical.

Dr. Horace Binney in his discussion emphasized the value of lipiodol injections as an aid in the localization of disease for the thoracic surgeon. He then discussed the possibilities of lobectomy, cautery, pneumectomy (after Graham), thorocoplasty (after Hedblom), and transplantation of a lobe (after Whittemore).

Dr. Harry P. Cahill of the Eye and Ear Infirmary recommended morphine before the supraglottic injection as an aid in quieting the patient.

Dr. Pritchard, in answer to several questions from the floor, stated that lipiodol decreased the sputum and improved the health in cases of bronchiectasis; that he had not been able to use it in children under 15 years of age; that iodine could be found in the urine as long as the lipiodol shadows were recognizable in the X-ray and finally that as many as 21 injections in a period of 1½ years had been given to a single patient with no ill effects.

SOCIETY MEETINGS

DISTRICT MEDICAL SOCIETIES

Essex North District Medical Society

Wednesday, May 4, 1927—Annual meeting. Russell Hall, Young Men's Christian Association Building, 40 Lawrence Street, Lawrence.

Thursday, May 5, 1927—Censors meet for examination of candidates at Hotel Bartlett, 95 Main Street, Haverhill, at 2 P. M.

Essex South District Medical Society

Wednesday, April 6, 1927—Dunvers State Hospital, Clinic, 5 P. M. Dr. Allan W. Rowe, Chief of Research Service at Evans Memorial, "The Differential Diagnosis of Endocrine Disorders." Followed by dinner. Discussion by Drs. Wood of Hethorne and Kline of Beverly, ten minutes each.

Thursday, May 5, 1927—Censors meet for examination of candidates at the Salem Hospital, 3:30 P. M.
Wednesday, May 11, 1927—Annual meeting. The Tavern, Gloucester. Speaker and subject to be announced later.

Norfolk District Medical Society

Below are the proposed meetings of the Norfolk District for the remainder of the year. Minor changes may be made in case of necessity.

March 29, 1927—Roxbury Masonic Temple, 8:15 P. M. Drs. P. S. Newell and F. J. Irving, "The Modern Treatment of the Eclampsias and Toxemias of Pregnancy." If time permits—"The Modern Methods of Handling Prospective Caesarean Cases."

May 10, 1927—Annual meeting. Details of meeting to be announced.

Suffolk District Medical Society

Meetings of the Suffolk District Medical Society and the Boston Medical Library will be held at the Boston Medical Library, 8 The Fenway, Boston, at 8:15 P. M., as follows:
March 29, 1927—Medical Section. Subject and speaker to be announced later.

April 27, 1927—Annual meeting. Election of officers. "Medical Education in the Orient and Occident," Dr. David L. Edsall, Dean, Harvard Medical School.

Notices of meetings must reach the JOURNAL office on the Friday preceding the date of issue in which they are to appear.